CITY OF MANCHESTER

REPORT

ON THE

HEALTH OF THE CITY OF MANCHESTER

FOR 1953

BY THE

MEDICAL OFFICER OF HEALTH

Henry Blacklock & Co. Ltd., Bradshaw House, Aims Hill Road, Manchester, 8.

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Health Department,
Town Hall,
Manchester, 2.

29th June, 1954

My Lord Mayor, Aldermen and Members of the City Council,

I have pleasure in presenting my report on the health of the City for the year 1953.

Tables of vital statistics for the year are shown on pages 18 to 30A.

Vital Statistics.

The main points of interest concerning the vital statistics for the year 1953 in comparison with previous years and England and Wales are as follows:—

Registrar General's estimated population (mid-year).

	1953	1952	1951 (Census)
Total	701,800	705,400	703,175
Males	331,098	332,794	331,748
Females	370,702	372,606	371,427

Marriages.

	1953	1952
Number of marriages registered ..	6,052	6,464
Marriage rate per 1,000 population	17.25	18.33

Births.

Registered live births number 12,218 (6,351 males, 5,867 females), giving a rate of 17.41 per 1,000 population compared with 17.53 in 1952, a decrease of 0.12. The birth rate for England and Wales was 15.5, an increase of 0 on the previous year.

Of the 12,218 births, 11,450 (5,955 males, 5,495 females) or 93.71 per cent were legitimate and 768 (396 males, 372 females) or 6.29 per cent. were illegitimate. The percentage of illegitimate births in 1952 was 6.62, which is a decrease of 0.33. The ratio of illegitimate to legitimate was 1 to 15.

There were 355 stillbirths (194 males, 161 females) giving a rate of 28. per 1,000 total births, which is 0.79 higher than the rate for 1952. The rat of registered "still" to registered "live" births was 1 to 34. The rate for Engla and Wales was 22.4.

Deaths.

The number of deaths allocated to the City during the year was 8,6 (4,431 males, 4,207 females), a ratio to the population of 1 in 81, or a dea rate per 1,000 of the population of 12.31 as compared with 12.16 for 19 and an average of 12.79 for the previous five years. The rate for England a Wales was 11.4.

The following table shows the principal causes of death during the year comparison with the previous year:—

	1953			1952		
	Number of deaths	Rate per 1,000 population	Percentage of total deaths	Number of deaths	Rate per 1,000 population	Percentage of total deaths
erculosis, respiratory ..	198	0.28	2.29	269	0.38	3.14
erculosis, other	18	0.03	0.21	24	0.03	0.28
er, all sites	1,519	2.16	17.59	1,536	2.18	17.91
er, lung and bronchus ..	337	0.48	3.90	326	0.46	3.80
ular lesions of central rvous system	1,151	1.64	13.32	1,108	1.57	12.92
t disease, all forms	2,550	3.63	29.52	2,491	3.54	29.05
nary disease	858	1.22	9.93	836	1.19	9.75
iratory diseases except berculosis	1,307	1.86	15.13	1,202	1.70	14.02
enza..	102	0.15	1.18	24	0.03	0.28
monia, all forms	338	0.48	3.91	336	0.48	3.92
chitis	791	1.13	9.16	741	1.05	8.64
tive system	292	0.42	3.38	312	0.44	3.64
nce	332	0.47	3.84	290	0.41	3.38

There was again a reduction in the number of deaths from tuberculosis, h of the respiratory system and all other forms, making this again the lowest nber of deaths ever recorded. The mortality rate of 0.28 for respiratory erculosis is the lowest ever recorded, whilst that for other forms equals the vious lowest rate in 1952.

There was a slight decrease in the number of deaths from cancer (all sites) a slight increase in the number of deaths from cancer of the lung or nchus, 290 males and 47 females as compared with 284 and 42 respectively 1952. Of the total number of deaths from cancer (all forms) 52.5 per cent. re 65 years of age and over.

There was one death from diphtheria, a non-immunised woman aged 33 rs. Other deaths from infectious diseases were whooping cough 4, ningococcal infections 6, measles 2, and acute infectious encephalitis 3. ere were no deaths from acute poliomyelitis.

ant Mortality.

Deaths of infants under one year of age registered during 1953 numbered . This was a decrease of 51 on the figure for the previous year and gives ate of 30.53 per 1,000 live births, 3.75 lower than for 1952. This is the est infant mortality rate recorded for Manchester. The rate for England Wales was 26.8.

The number of neo-natal deaths was 256 giving a rate of 20.87 per 1,00 live births as compared with 269 deaths and a rate of 21.75 in 1952. The lowe recorded neo-natal death rate was 18.43 in 1949.

Maternal Mortality.

There were no deaths from puerperal and post-abortive sepsis durir 1953, and 10 deaths from other maternal causes. The maternal death ra was 0.80 per 1,000 total births compared with 0.71 for 1952, which was th lowest ever recorded in the City. The maternal death rate for England ar Wales was 0.76, which was also a slight increase on the rate for the previou year of 0.72.

Mental Health Service.

This important service has been steadily expanding since its inception July, 1948, and as it grows the horizon widens and the wisdom of establishi the service becomes more and more apparent. It is already obvious th although a good start has been made the scope and need for further expansi is great. The shortage of consultant psychiatrists has hitherto present obstacles to obtaining adequate specialist advice in connection with this servi but with the approval of the Health Committee arrangements have now be made with a psychiatrist of senior consultant rank to give advice within t limits of the time he can afford. There is a continuing shortage of hospi accommodation for cases of mental illness and for cases of mental deficien

Infectious Diseases and Immunization.

Smallpox.

Special precautions were necessary in the City because of the prevalen of cases of smallpox in other areas in South-East Lancashire in 1953, fortunately no smallpox cases were found in Manchester. Indeed, no c has been infected with smallpox in the City since 1930—a severe case smallpox infected elsewhere was found in 1946 but he was suffering from disease when he arrived in this area. No further cases were reported Manchester as a result of this case. This fortunate experience over a l period of years can be expected to continue only if the vaccination leve raised. About 63 per cent. of infants were vaccinated in the years immediat prior to 1948 when compulsory vaccination was abolished. In 1949, corresponding percentage had fallen to the disastrously low level of 2 As a result of new administrative measures the percentage has been raised 47.4 in 1953. Although the number of vaccinations is still much too lo would prefer to rely on persuasion rather than on compulsion and would welcome at present a return to the principle of compulsory vaccination.

Poliomyelitis.

During the year, there was a reduction in the number of cases of ac poliomyelitis compared with previous years. No deaths occurred from disease in 1953. For some reason not ascertained, Manchester had poliomyelitis relative to the size of population than other large cities in country. But there is no reason for complacency—until research workers h discovered a reliable means of preventing and dealing with outbreaks we m expect further cases, particularly in late summer.

Measles.

There was a high incidence of measles in the first four months of the ear. Thereafter, the number of notified cases fell to almost negligible roportions and that position continues at the time of writing this report. Measles tends to reach a high peak at intervals of about two years and therefore is expected that another peak will occur about the end of 1954.

Whooping Cough.

The efficacy of immunization against whooping cough is now well tablished. The scheme of whooping cough immunization research ended in 952 and since then immunization has been continued as a routine measure by e Health Department.

ood Poisoning.

There has been a notable reduction of the reported incidence of food oisoning which in 1953 was almost half of that in 1952. There is still much be done in relation to the improvement of food hygiene.

The Murkiness of Smog.

The ugly word smog has been invented to describe the result of atmos-eric pollution. The equally ugly word MURK has been invented to describe nit of measurement of dirt in the air. Both words, ugly though they may be, e most useful in stimulating attention to the question of pollution by smoke d its abatement. A new type of apparatus has been devised for the measure-ent of the number of murks, at the laboratory of the Shirley Institute in dsbury. This represents an advance in the technique of measurement and is be warmly welcomed. Further details will be found in the section of this port headed Smoke Abatement.

The central smokeless zone has continued to attract public attention and proval. Its success has encouraged further efforts in smoke abatement and ee more smokeless zones have been planned, one of which awaits Ministry proval.

Housing.

The intractable problem of unsatisfactory housing conditions will vitably continue for many years. A programme of slum clearance has been mmenced and the City Council has received and approved a large number epresentations in relation to unfit houses. Many thousands of unfit houses ait representation but it would not be desirable to make official representations a rate faster than the present one in that there would be no point in getting re than a little ahead, as at present, of the capacity for erecting new houses. e need for the provision of new houses as fast as possible is as urgent as ever.

Water Supply.

Recent proposals of the Waterworks Committee for the increased tection of the water supplies are welcomed. The quality of a public water ply should reach the highest possible standard. Potential factors which affect safety are referred to in the appropriate section of this Report.

I again express my grateful thanks to Dr. William Chadwick, the Chairman of the Health Committee, and to the members of the Health Committee for their continued support and encouragement and to my colleagues in the Health and other Departments of the Corporation for their very great help.

I have the honour to be,

My Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

CHARLES METCALFE BROWN,

Medical Officer of Health

HEALTH COMMITTEE.

1953-54.

CHAIRMAN—Councillor W. Chadwick, M.B., CH.B.

DEPUTY CHAIRMAN—Councillor J. McGrath.

THE LORD MAYOR—Alderman A. Moss, J.P., M.A.

lderman J. E. Burgess
,, T. M. Larrad, J.P.
,, W. Onions, M.B.E., J.P.
,, F. E. Tylecote, J.P., M.D., F.R.C.P.
,, T. Walker, J.P.
uncillor Hannah Baldwin, J.P.
,, Nellie Beer, J.P.
,, James Bowes
,, P. Buckley, M.B., B.CH., B.A.O.
,, P. Chadwick, J.P.

Councillor J. Conway
,, Eveline Hill, M.P., J.P.
,, Mary Knight
,, B. Lawson
,, T. Lomas
,, G. McCall
,, W. Sharp
,, A. R. Smith
,, Lily Thomas, J.P.
,, R. E. Thomas, J.P.
,, Mabel S. Whittaker, J.P.

SUB-COMMITTEES.

The following sub-committees are appointed to carry out certain of th duties referred to the Health Committee; these are particularised below With the exception of those of the Sanitary Defects Sub-committee, thei proceedings are subject to approval by the Health Committee.

Sanitary.

Sanitation and buildings; nuisance and offensive trades; common lodgin houses and houses let in lodgings; factories; workplaces and shops; provision regarding food and drugs; poisons and pharmacy; public conveniences; th granting of certificates of disrepair and reports to owners under the Rent an Mortgage Restrictions Acts; the Rag Flock and Other Filling Materials Ac 1951; the Shops Act, 1950, and the Young Persons (Employment) Act, 193 the abatement of smoke nuisances and atmospheric pollution; hairdresse registration; street traders and persons trading in food on open sites; and a questions relating to the management and administration of the Sanita Services Division with the exception of those relating to the appointment staff, salaries, wages and conditions of service of officers and servants.

Sanitary Defects.

To this Sub-committee are delegated under Section 273 of the Public Heal Act, 1936, the Health Committee's powers to deal with urgent cases of sanita defects in premises and it is empowered to authorise the service of notic upon owners, occupiers or other persons responsible requiring them, with the period specified in the notices, to execute the works required and, in t event of the notices not being complied with, to instruct the Medical Offic of Health to carry out the work required and/or to instruct the Town Clerk institute the necessary summary proceedings.

Maternity and Child Welfare.

Maternity and child welfare, including all the duties in the proposals the City Council under the National Health Service Acts, relating to midwife health visiting, care of mothers and young children (excepting the porti relating to the management of Knowle House), home nursing, prevention illness, care and after-care and domestic helps; the cleansing of perso infested with vermin; the control and management of day nurseries; and t administration of the Nursing Services Division with the exception of questio relating to the appointment of staff, salaries, wages and conditions of serv of officers and servants.

Health Centres.

All matters relating to the planning, siting, erection and equipment health centres, and to undertake, as and when they are erected, the cont and management of health centres in the City with the exception of questi relating to the appointment of staff, salaries, wages and conditions of serv of officers and servants.

Mental Health.

All matters arising out of the proposals of the City Council under National Health Service Act concerning mental health with the exception questions relating to the appointment of staff, salaries, wages and conditi of service of officers and servants.

Ambulance and Transport.

All matters relating to the control and management of ambulances and mbulance stations, passenger cars and other vehicles and garages, with the xception of questions relating to the appointment of staff, salaries, wages and onditions of service of officers and servants.

Residential Homes.

All matters relating to the control and management of Dr. Garrett Memorial ome, Knowle House, Langho Colony, Ashton House and Walton House, ith the exception of questions relating to the appointment of staff, salaries, ages and conditions of service of officers and servants, and the purchase of ulk supplies.

Staff.

All questions affecting the appointment of staff, salaries, wages and conditions service of officers and servants in the employ of the Health Committee.

Supplies.

The purchase of bulk supplies of articles required by Langho Colony, r. Garrett Memorial Home, Knowle House, Ashton House, Walton House d the day nurseries, and those required by the Children's, Education and elfare Services Committee for use at residential institutions under their ntrol.

HEALTH OFFICERS.

(A) Medical

C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law	Medical Officer of Health
A. M. M. Grierson, O.B.E., M.D., D.P.H., F.R.S.E.	Deputy Medical Officer of Health
B. J. Griffiths, B.SC., M.R.C.S., L.R.C.P., D.P.H.	Senior Medical Officer—Administrati
Winifred A. Kane, M.R.C.S., L.R.C.P., D.P.H.	Senior Medical Officer—Nursing Servic (*resigned* 15.3.53)
Alice I. Burke, M.B., CH.B., D.P.H. ..	Senior Medical Officer—Nursing Servic (*appointed* 16.3.53)
Anne Doreen Lepine, M.R.C.S., L.R.C.P.	Medical Officer (Diphtheria Immu zation)
M. J. Greenberg, M.B., M.R.C.P. ..	Consultant Chest Physician—Part-Tir

(B) Other Professional

J. Lawson, M.R.SAN.I.	Chief Sanitary Inspector (*retired* 12.8.5
J. Graham, M.R.SAN.I.	Chief Sanitary Inspector (*appoint* 13.8.53)
Alfred N. Leather, B.SC., F.R.I.C. ..	Public Analyst

(C) Lay

C. Hay, M.B.E.	Chief Administrative Assistant—Nurs Services Division
C. W. Wilkinson	Chief Administrative Assistant—Gene Services Division

General Services Division

GENERAL STATISTICS

METEOROLOGY

VITAL STATISTICS

REGISTRAR GENERAL'S ABSTRACT

INFECTIOUS DISEASES

FOOD POISONING

EPIDEMIOLOGY

MENTAL HEALTH

HEALTH EDUCATION

AMBULANCE SERVICE

HOSPITAL CAR SERVICE

MUNICIPAL CAR POOL

DISINFECTION

RESIDENTIAL HOMES:

- Langho Colony for sane epileptics
- Dr. Garrett Memorial Home for convalescent children

MUNICIPAL HOSTELS:

- Ashton House for women
- Walton House for men

GENERAL STATISTICS

Registrar General's estimated population mid-year, 1953				
	Males 331,098			
	Females 370,702			701,800
Census population, 1951	Males 331,748			
	Females 371,427			703,175
	Males	Females	Total	
Live births — Legitimate	5,955	5,495	11,450	
Illegitimate	396	372	768	12,218
Live birth rate per 1,000 of population				17.41
	Males	Females	Total	
Stillbirths — Legitimate	175	148	323	
Illegitimate	19	13	32	355
Stillbirth rate per 1,000 total (live and still births)				28.24
Deaths	Males 4,431			
	Females 4,207			8,638
Death rate per 1,000 of population	Males 13.38			
	Females 11.35			12.31
Comparability factor			Births	0.95
			Deaths	1.11
Birth rate as adjusted by factor				16.54
Death rate as adjusted by factor				13.66
Excess of births over deaths				3,580
Percentage of mortality occurring in institutions				46.69

Maternal mortality :—

	Deaths	Rate per 1,000 total births	
Sepsis of pregnancy and abortion	..	..	
Other maternal causes	10	0.80	0.80

Deaths of infants under one year of age:—

All infants	373—rate per 1,000 live births	30.53
Legitimate infants	352—rate per 1,000 legitimate live births	30.74
Illegitimate infants	21—rate per 1,000 illegitimate live births	27.34

Number of persons married per 1,000 of population 17.25

Area of the City in acres		27,2
Number of persons per acre		
Number of occupied structurally separate dwellings at Census 1951		200,4
Number of persons per occupied structurally separate dwellings at Census, 1951		3
Number of houses according to Rate Book (1st April, 1953)		208,
Number of persons per house		3
Rateable value (1st April, 1953)		£6,671,
Sum represented by a penny rate (estimated)		£26,
Number of new houses erected during 1953 :		
By local authority	2,541	
By other bodies or persons	390	
		2,

The City of Manchester is the centre of one of the largest industrial ar in the world. Road and rail communications, the Port of Manchester and recent years, Ringway Airport, from which regular transatlantic air servi now operate, have combined to retain the City's importance in industry a commerce and its business links with the rest of the world.

Whilst a large percentage of the population is employed in transport a distributive services the chief industries in the City are engineering, text and clothing.

In addition to its importance in the industrial world, the City also cla prominence in medical, educational and scientific fields through its hospit Medical School, University and College of Technology.

Comprehensive housing schemes are gradually causing the poo centralised inhabited sites to disappear, and to the north and south of the C there are now large housing estates which have been quoted as examples of best modern methods.

METEOROLOGY.

Extracts from readings taken at the Whitworth Observatory, Manchester.

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which fog was noted at 09·00 G.M.T.
uary	38·3	39·7	43·4	36·6	40·0	1·40	9	10·85	17
ruary	38·5	40·5	45·8	36·5	41·1	1·68	9	38·36	8
ch	39·0	41·5	52·5	35·5	44·0	2·00	6	119·35	18
il	41·2	45·1	52·6	38·5	45·5	2·30	10	155·10	—
.. .. ..	50·8	56·0	64·9	47·9	56·4	1·83	9	191·58	2
.. .. ..	54·3	58·4	65·9	51·7	58·8	2·38	13	130·50	3
.. .. ..	55·7	60·1	67·3	54·4	60·9	4·21	18	168.02	2
ust	56·9	61·3	68·5	55·1	61·8	3·74	14	140·70	2
ember	53·3	56·6	64·2	51·5	57·9	2·98	13	113·40	9
ber	47·1	49·0	56·7	42·6	49·7	2·08	9	70·68	17
ember	45·9	47·9	52·3	44·3	48·3	3·22	12	33·90	10
mber	43·1	44·5	49·3	40·9	45·1	1·23	10	15·81	19
YEAR ..	47·0	50·0	56·8	44·6	50·8	29·05	132	1188·25	107
	Means					Totals			

Registrar General's Return.

Birth rate, death rate, and analysis of mortality, 1953, in England and Wales, grouped areas, London and Manchester.

	Birth rate per 1,000 total population		Annual death rate per 1,000 population									Rate per 1,000 live births	
	Live births	Still births	All causes	Typhoid and paratyphoid fever	Whooping cough	Diphtheria	Tuberculosis	Influenza	Smallpox	Acute poliomyelitis and polioencephalitis	Pneumonia	Diarrhoea and enteritis (under two years)	Total deaths under one year
England and Wales	15·5	0·35	11·4	0·00	0·01	0·00	0·20	0·16	0·00	0·01	0·55	1·1	26·8
160 county boroughs and great towns, including London ..	17·0	0·43	12·2	0·00	0·01	0·00	0·24	0·15	0·00	0·01	0·59	1·3	30·8
160 smaller towns, estimated resident population 25,000 to 50,000 at 1951 Census..	15·7	0·34	11·3	—	0·00	0·00	0·19	0·17	0·00	0·01	0·52	0·9	24·3
London Administrative County	17·5	0·38	12·5	—	0·00	—	0·24	0·15	—	0·01	0·64	1·1	24·8
Manchester	17·4	0·51	12·3	—	0·01	0·00	0·31	0·15	—	—	0·48	0·7	30·5

Causes of death.

Registrar General's Return.

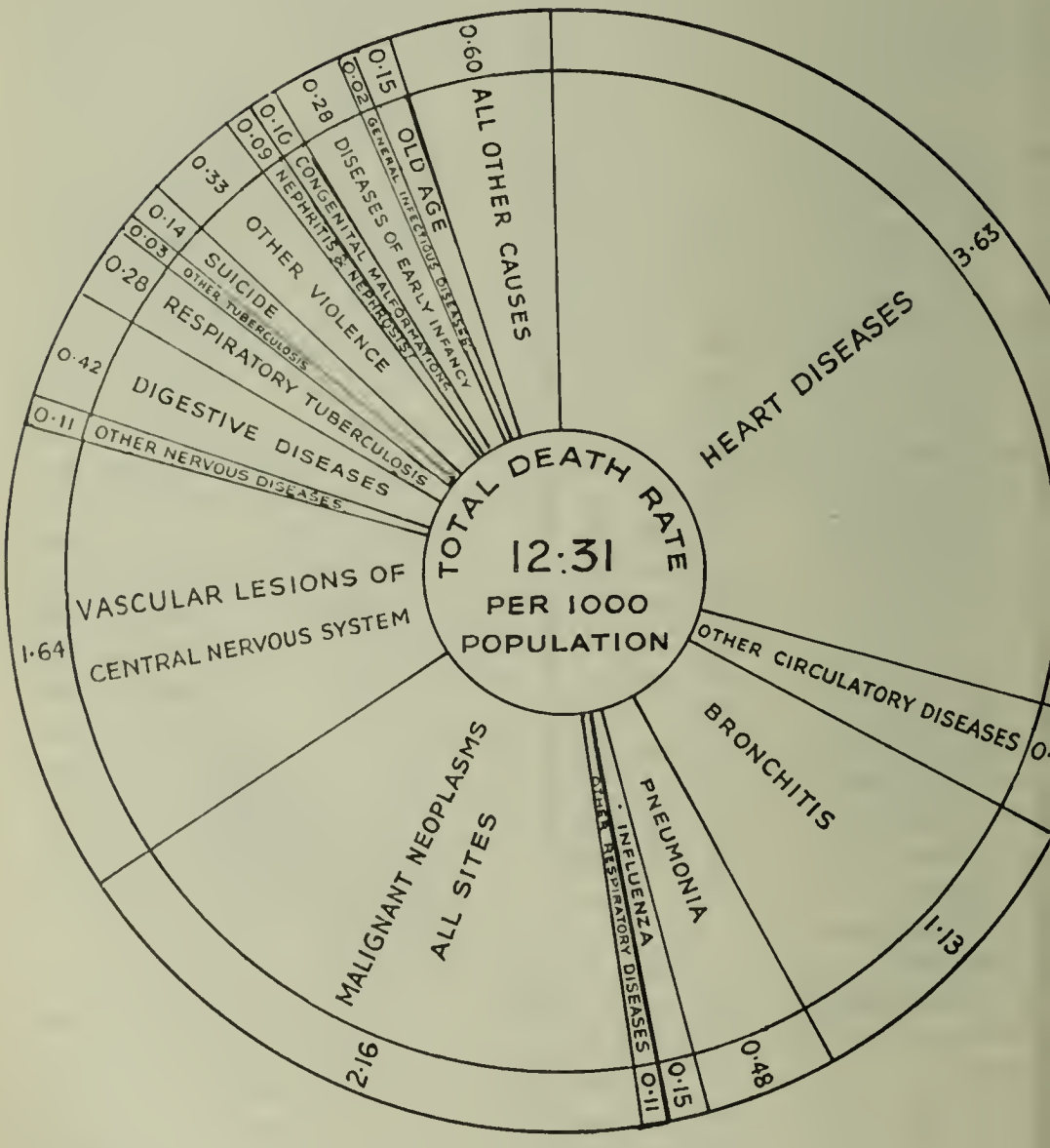
Manchester.

Causes of death	Ages at death										
	Male	Female	All ages	0–	1–	5–	15–	25–	45–	65–	75+
rculosis, respiratory	129	69	198	—	1	—	12	55	96	21	13
,, other	12	6	18	—	2	—	3	5	7	1	—
ilitic disease	12	5	17	—	—	—	—	—	4	9	4
theria	—	1	1	—	—	—	—	1	—	—	—
ping cough	2	2	4	3	1	—	—	—	—	—	—
ngococcal infections	2	4	6	3	2	—	—	—	1	—	—
e poliomyelitis	—	—	—	—	—	—	—	—	—	—	—
les	1	1	2	—	2	—	—	—	—	—	—
r infective and parasitic diseases	5	15	20	—	2	—	2	4	5	4	3
nant neoplasm, stomach	127	109	236	—	—	—	—	9	79	91	57
,, lung, bronchus	290	47	337	—	—	—	1	18	190	102	26
,, breast	—	119	119	—	—	—	—	12	46	30	31
,, uterus	—	75	75	—	—	—	—	7	41	20	7
malignant and lymphatic neoasms	361	361	722	—	3	—	10	53	234	232	190
emia, aleukaemia	12	18	30	1	2	2	2	2	10	10	1
tes	16	30	46	—	—	—	1	—	16	16	13
lar lesions of central nervous system	461	690	1151	—	—	—	3	18	242	369	519
ary disease, angina	557	301	858	—	—	—	1	26	311	323	197
rtension with heart disease ..	97	105	202	—	—	—	—	5	62	70	65
heart disease	592	898	1490	—	—	2	4	63	262	376	783
circulatory disease	154	168	322	—	—	—	1	8	69	98	146
nza	43	59	102	1	3	1	—	1	25	32	39
nonia	183	155	338	49	10	2	1	12	60	107	97
hitis	516	275	791	17	4	—	—	13	223	276	258
diseases of respiratory system ..	56	20	76	3	1	—	2	3	35	19	13
of stomach and duodenum ..	68	19	87	—	—	—	—	6	34	28	19
tis, enteritis and diarrhoea ..	15	23	38	8	—	1	—	4	10	8	7
itis and nephrosis	32	33	65	—	—	1	2	12	24	12	14
plasia of prostate	47	—	47	—	—	—	—	—	3	14	30
ancy, childbirth, abortion	—	10	10	—	—	—	2	8	—	—	—
nital malformations	38	33	71	53	4	—	2	6	4	—	2
defined and ill-defined diseases ..	387	440	827	220	2	14	12	49	162	139	229
vehicle accidents	60	26	86	—	7	8	11	22	16	9	13
her accidents	83	54	137	12	12	11	10	21	23	22	21
e	68	32	100	—	—	—	2	29	48	13	8
cide and operations of war ..	5	4	9	3	—	—	—	4	2	—	—
TOTALS ..	4431	4207	8638	373	58	42	84	476	2349	2451	2805

Note.—A table showing the mortality rates due to various causes, etc., from 1914 onwards appears at page 30A.

DEATHS FROM PRINCIPAL CAUSES

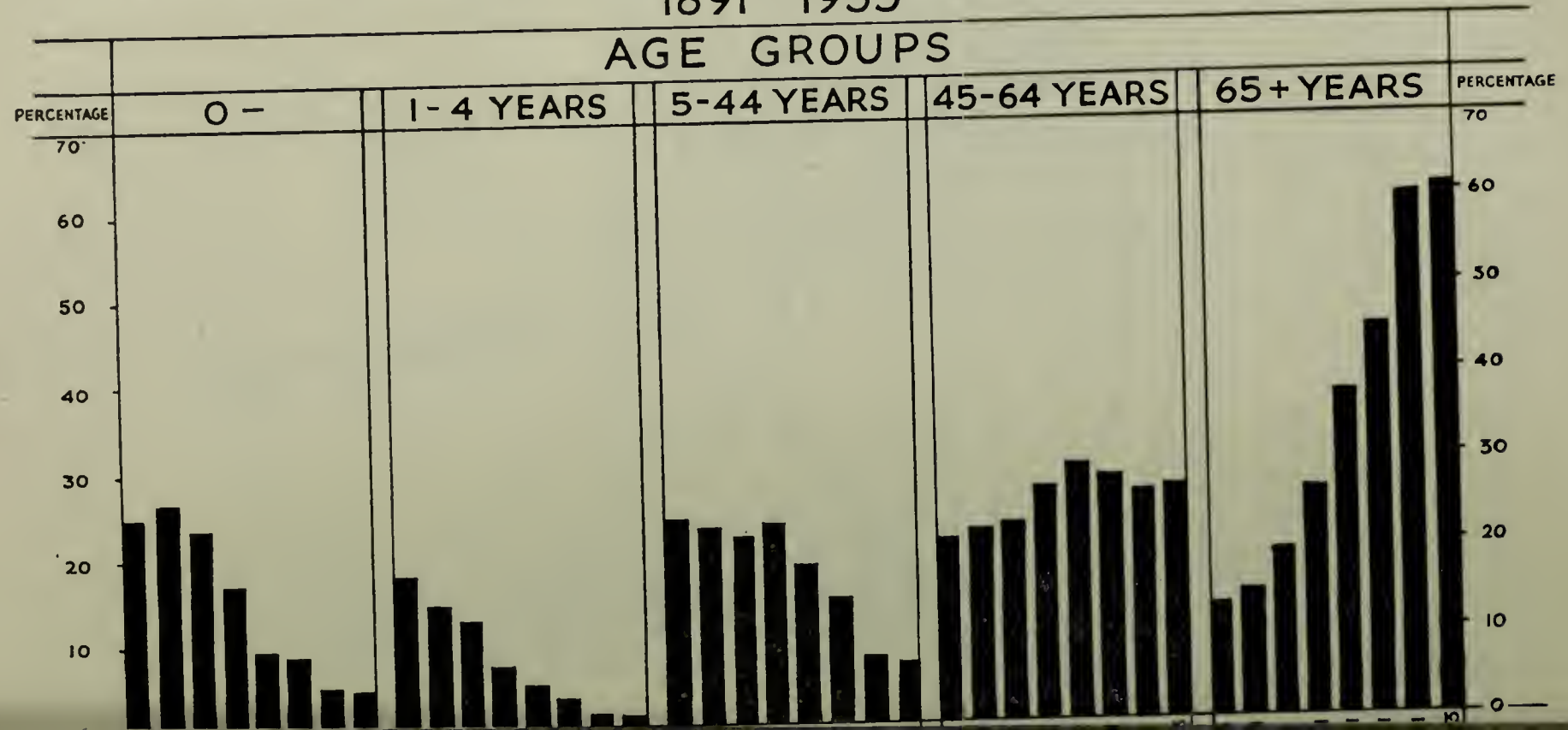
PROPORTION TO TOTAL DEATHS



Deaths in age groups and percentages to total deaths.

Year	Total number of deaths	Age groups and percentages									
		0—		1—4		5—44		45—64		65+	
		No.	%	No.	%	No.	%	No.	%	No.	%
1 ..	13,202	3,299	24·99	2,225	16·85	3,178	24·07	2,756	20·88	1,744	13·21
1 ..	11,801	3,114	26·39	1,676	14·20	2,725	23·09	2,627	22·26	1,659	14·06
..	12,272	2,901	23·64	1,516	12·35	2,711	22·09	2,790	22·74	2,354	19·18
..	10,093	1,707	16·91	728	7·21	2,313	22·92	2,687	26·62	2,658	26·34
..	10,618	1,027	9·67	503	4·74	1,943	18·30	3,144	29·61	4,001	37·68
..	10,016	832	8·31	265	2·65	1,467	14·65	2,886	28·81	4,566	45·58
..	9,676	439	4·54	64	0·66	748	7·73	2,568	26·54	5,857	60·53
..	8,576	424	4·94	75	0·87	637	7·43	2,410	28·10	5,030	58·65
..	8,638	373	4·32	58	0·67	602	6·97	2,349	27·19	5,256	60·85

PERCENTAGES OF DEATHS IN VARIOUS AGE GROUPS TO TOTAL DEATHS
1891 - 1953



NIA	BRONCHITIS		DIGESTIVE SYSTEM		GENITO URINARY SYSTEM		ALL CAUSES	
Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
0·48	792	1·13	292	0·42	172	0·25	8635	12·30
0·74	17	0·78	7	0·32	2	0·09	250	11·49
0·58	33	1·75	9	0·48	3	0·16	225	11·94
0·45	22	1·23	11	0·61	5	0·28	211	11·79
0·72	24	1·58	7	0·46	8	0·53	307	20·15
0·56	21	1·23	12	0·62	4	0·21	236	12·11
0·53	25	1·21	7	0·34	4	0·19	227	11·02
0·52	31	1·35	8	0·35	12	0·52	288	12·55
0·14	16	0·72	2	0·10	7	0·32	253	11·41
0·28	12	0·84	8	0·56	2	0·14	169	11·83
0·50	13	0·65	9	0·45	5	0·25	256	12·78
1·01	12	0·86	4	0·29	3	0·22	217	15·64
0·41	21	0·95	9	0·41	5	0·23	370	16·80
0·69	11	0·64	5	0·29	6	0·35	197	11·39
0·48	39	1·70	7	0·30	6	0·26	320	13·92
0·34	16	0·91	5	0·29	5	0·29	205	11·72
0·37	29	1·55	8	0·43	1	0·05	223	11·90
0·26	17	0·87	9	0·46	6	0·31	235	12·06
0·20	26	1·28	11	0·54		0·15	234	11·52
0·57	11	0·70	6	0·38	3	0·19	213	13·52
0·54	25	1·69	6	0·41	6	0·41	193	13·03
0·72	20	1·03	11	0·57	—	—	245	12·64
0·65	18	0·97	8	0·43	10	0·54	228	12·30
0·44	18	0·88	5	0·24	3	0·15	219	10·70
1·04	32	2·22	9	0·62	3	0·21	268	18·55
0·68	35	1·83	4	0·21	7	0·37	291	15·23
0 77	33	1·69	8	0·41	2	0·10	243	12·42
0·30	18	0·77	14	0·60	4	0·17	213	9·06
0·23	10	0·59	6	0·35	3	0·18	184	10·77
0·31	39	1·71	15	0·66	9	0·39	292	12·79
0·29	19	1·10	10	0·58	5	0·29	211	12·26
0·67	22	1·14	7	0·36	5	0·26	256	13·24
0·82	32	1·75	14	0·77	6	0·33	276	15·12
0·37	29	1·35	12	0·56	6	0·28	243	11·33
0·68	11	0·94	2	0·17	2	0·17	99	8·44
0·07	9	0·59	8	0·52	5	0·33	159	10·40
0·21	23	0·48	9	0·19	6	0·13	379	7·97

PRINCIPAL CAUSES OF DEATH 1933 AND 1953

(Figures compiled by

Wards	Estimated population	Area in acres	Persons per acre	Live births		Deaths		Natural rate of increase	Deaths under 1 year per 1,000 live births
				Total	Rate per 1,000 pop.	Total	Rate per 1,000 pop.		
City of Manchester ..	701800	27255	25·75	12218	17·41	8635	12·30	+ 5·11	30·53
Alexandra Park	21758	780	27·89	218	10·02	250	11·49	— 1·47	22·94
All Saints	18848	315	59·83	509	27·01	225	11·94	+ 15·07	35·36
Ardwick	17899	436	41·05	455	25·42	211	11·79	+ 13·63	26·37
Barlow Moor	15236	1120	13·60	180	11·81	307	20·15	— 8·34	11·11
Beswick..	19480	243	80·16	371	19·05	236	12·11	+ 6·94	24·26
Blackley	20594	1226	16·80	366	17·77	227	11·02	+ 6·75	49·18
Bradford	22945	772	29·72	429	18·70	288	12·55	+ 6·15	32·63
Burnage	22177	737	30·09	208	9·38	253	11·41	— 2·03	19·23
Cheetham	14284	446	32·03	233	16·31	169	11·83	+ 4·48	51·50
Chorlton-cum-Hardy	20030	849	23·59	167	8·34	256	12·78	— 4·44	47·90
Collegiate Church	13879	501	27·70	276	19·89	217	15·64	+ 4·25	28·99
Crumpsall	22024	1805	12·20	282	12·80	370	16·80	— 4·00	21·28
Didsbury	17292	1181	14·64	218	12·61	197	11·39	+ 1·22	13·76
Gorton North	22994	540	42·58	360	15·66	320	13·92	+ 1·74	47·22
Gorton South	17493	631	27·72	274	15·66	205	11·72	+ 3·94	40·15
Harpurhey	18744	372	50·39	349	18·62	223	11·90	+ 6·72	22·92
Levenshulme	19492	606	32·17	239	12·26	235	12·06	+ 0·20	12·55
Lightbowne	20304	390	52·06	275	13·54	234	11·52	+ 2·02	18·18
Longsight	15755	355	44·38	235	14·92	213	13·52	+ 1·40	38·30
Miles Platting	14813	444	33·36	293	19·78	193	13·03	+ 6·75	40·96
Moss Side East	19390	277	70·00	471	24·29	245	12·64	+ 11·65	36·09
Moss Side West	18532	268	69·15	387	20·88	228	12·30	+ 8·58	28·42
Moston	20464	1170	17·49	297	14·51	219	10·70	+ 3·81	26·94
New Cross	14444	354	40·80	327	22·64	268	18·55	+ 4·09	18·35
Newton Heath	19106	905	21·11	285	14·92	291	15·23	— 0·31	21·05
Newtown	19572	498	39·30	489	24·98	243	12·42	+ 12·56	53·17
Northenden	23507	2230	10·54	416	17·70	213	9·06	+ 8·64	43·27
Old Moat	17077	624	27·37	201	11·77	184	10·77	+ 1·00	19·90
Openshaw	22824	543	42·03	345	15·12	292	12·79	+ 2·33	26·09
Rusholme	17207	726	23·70	218	12·67	211	12·26	+ 0·41	18·35
St. George's	19335	318	60·80	453	23·43	256	13·24	+ 10·19	30·91
St. Luke's	18258	287	63·62	427	23·39	276	15·12	+ 8·27	30·44
St. Mark's	21439	517	41·47	356	16·61	243	11·33	+ 5·28	16·85
St. Peter's	11728	837	14·01	181	15·43	99	8·44	+ 6·99	38·67
Withington	15295	560	27·31	196	12·81	159	10·40	+ 2·41	25·51
Wythenshawe	47581	3392	14·03	1232	25·89	379	7·97	+ 17·92	28·41

Causes of death in infancy and childhood.

(Figures compiled by Medical Officer of Health.)

Cause of death	Under 1 Year					1 to 5 Years					Total under 5 Years
	Under 4 Weeks	4 Weeks to 3 Months	3—6 Months	6—12 Months	Total	1—2 Years	2—3 Years	3—4 Years	4—5 Years	Total	
All causes	**255**	**50**	**38**	**30**	**373**	**23**	**16**	**11**	**8**	**58**	**431**
Tuberculosis, respiratory	—	—	—	—	—	—	1	—	—	1	1
" meninges and central nervous system	—	—	—	—	—	—	1	—	1	2	2
" intestine, peritoneum and mesenteric glands	—	—	—	—	—	—	—	—	—	—	—
" other	—	—	—	—	—	—	—	—	—	—	—
Syphilitic diseases	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—
Scarlet fever	—	—	—	—	—	—	—	—	—	—	—
Whooping cough	—	2	—	1	3	1	—	—	—	1	4
Measles	—	—	—	—	—	1	—	—	1	2	2
Acute poliomyelitis	—	—	—	—	—	—	—	—	—	—	—
Meningococcal infections	—	1	—	2	3	1	1	—	—	2	5
Acute infectious encephalitis	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—
Other food poisoning	—	—	—	—	—	—	—	—	—	—	—
Meningitis (not tubercular)	—	—	—	—	—	1	—	—	—	1	1
Other diseases of nervous system	—	1	—	—	1	1	1	2	—	4	5
Influenza	—	—	—	1	1	1	—	—	1	2	3
Broncho pneumonia with immaturity											
" " without "	8	13	12	10	43	5	3	—	—	8	51
Lobar " with "	—								—		
" " without "	—	—	—	—	—	1	—	—	—	1	1
Other " with "	2								—		
" " without "	4	1	1	—	8	1	—	—	—	1	9
Bronchitis	2	3	6	3	14	4	1	—	—	5	19
Other respiratory diseases	—	1	2	1	4	—	1	1	—	2	6
Diarrhoea (4 weeks—2 years)	—	5	1	3	9	—	—	—	—	—	9
Other diseases of digestive system	5	2	1	1	9	—	—	—	—	—	9
Congenital malformations	32	11	7	3	53	—	2	1	—	3	56
Birth injury with immaturity	14	—	—	—	14	—	—	—	—	—	14
" " without "	29	—	1	—	30	—	—	—	—	—	30
Atelectasis with immaturity	25	—	—	—	25	—	—	—	—	—	25
" without "	24	1	—	1	26	—	—	—	—	—	26
Diarrhoea of newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
" " without "	—	—	—	—	—	—	—	—	—	—	—
Other sepsis of newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
" " " without "	1	—	—	—	1	—	—	—	—	—	1
Other diseases of early infancy with immaturity	1	—	—	—	1	—	—	—	—	—	1
" " " without "	15	—	2	—	17	—	—	—	—	—	17
Immaturity unqualified	85	—	—	—	85	—	—	—	—	—	85
Suffocation (overlain)	—	2	—	—	2	—	—	—	—	—	2
Other violence	8	3	1	1	13	5	4	5	4	18	31
Other causes	—	4	4	3	11	1	1	2	1	5	16

871 – 1953
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1881 – 1885
1886 – 1890
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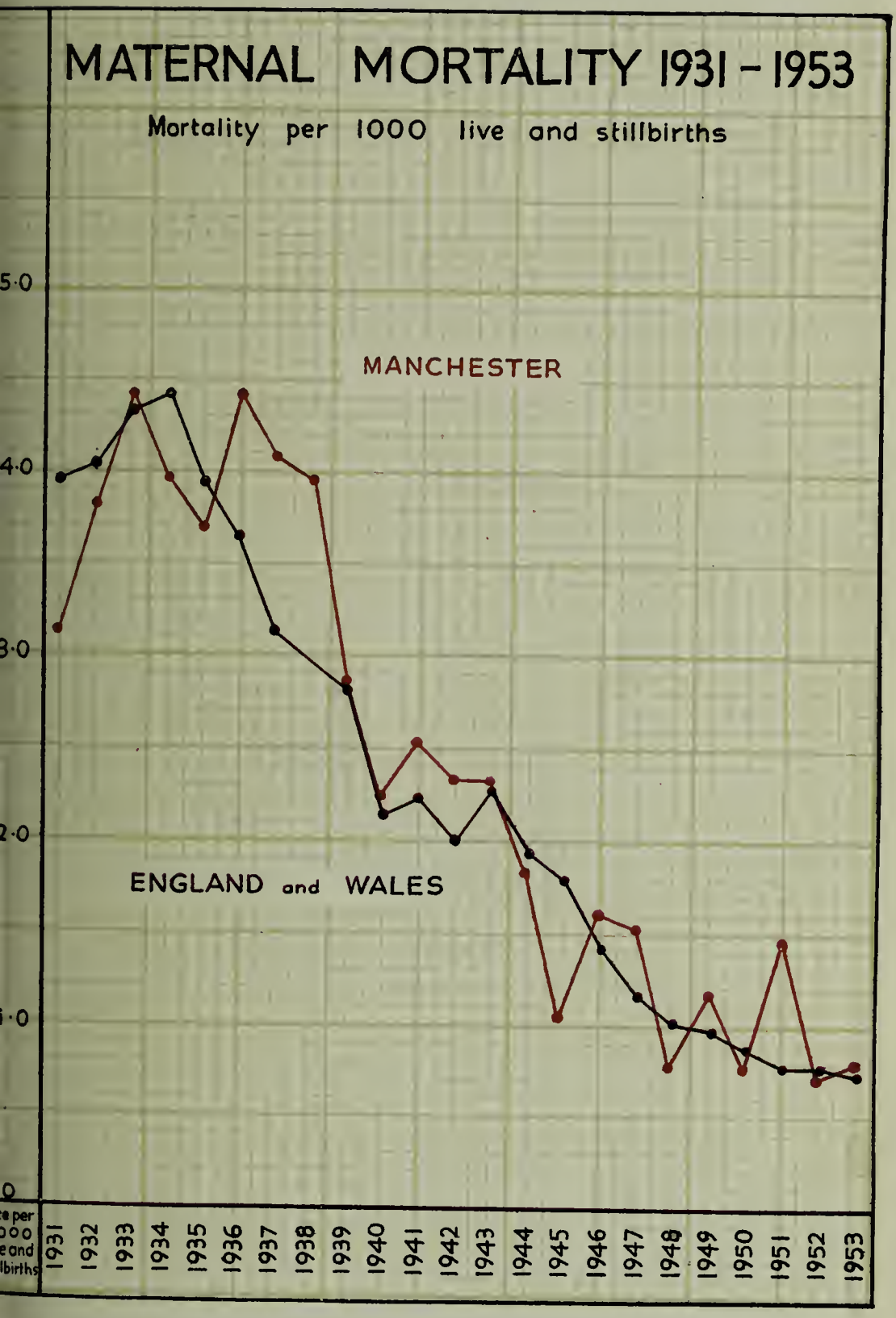
MATERNAL MORTALITY 1931 - 1953
Mortality per 1000 live and stillbirths
MANCHESTER
ENGLAND and WALES
5·0
4·0
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1932
1933
1934
1935
1936
1937
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DEATH RATE 1871-1953
Per 1000 of the population
MANCHESTER
ENGLAND and WALES
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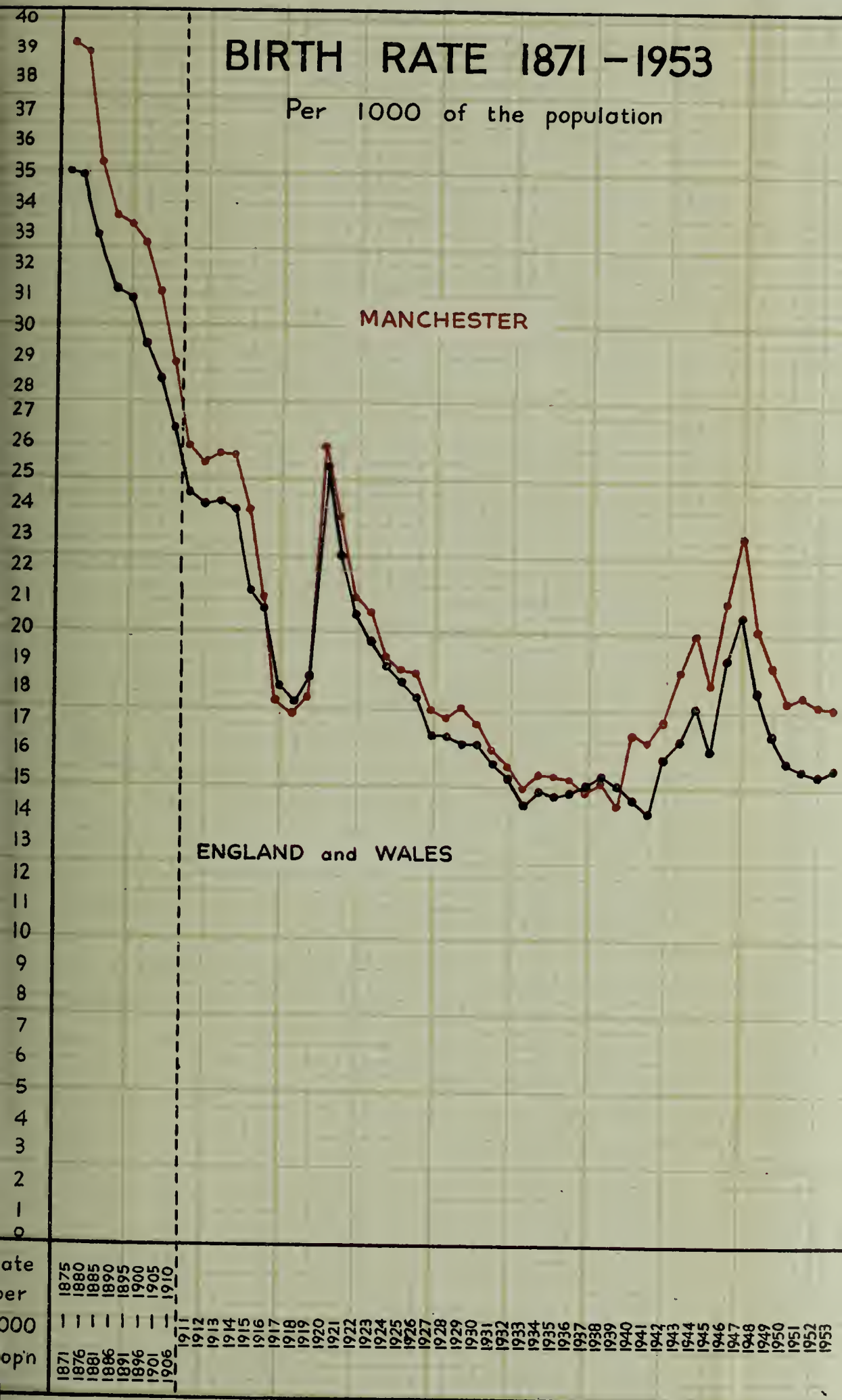
BIRTH RATE 1871 – 1953
Per 1000 of the population
MANCHESTER
ENGLAND and WALES
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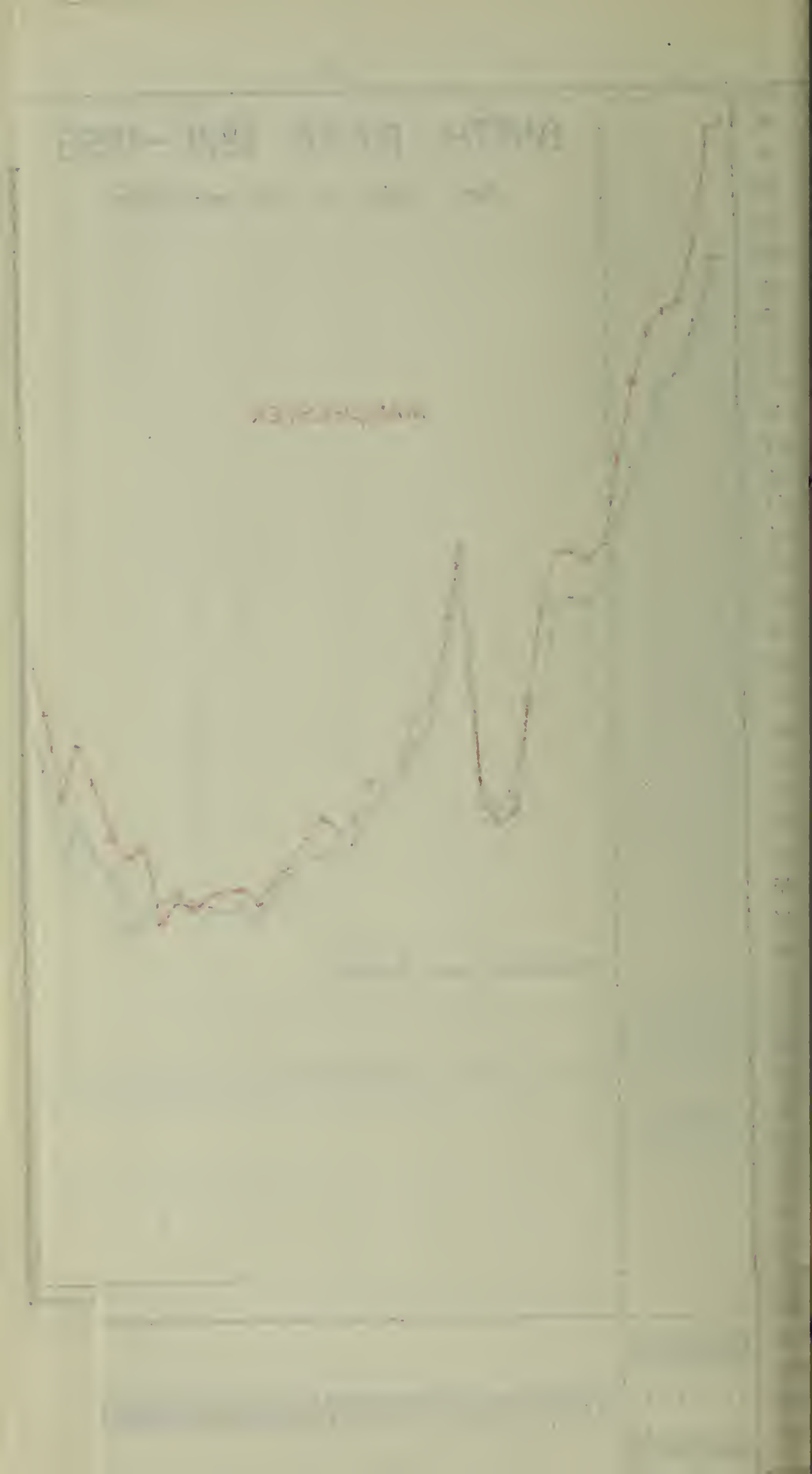
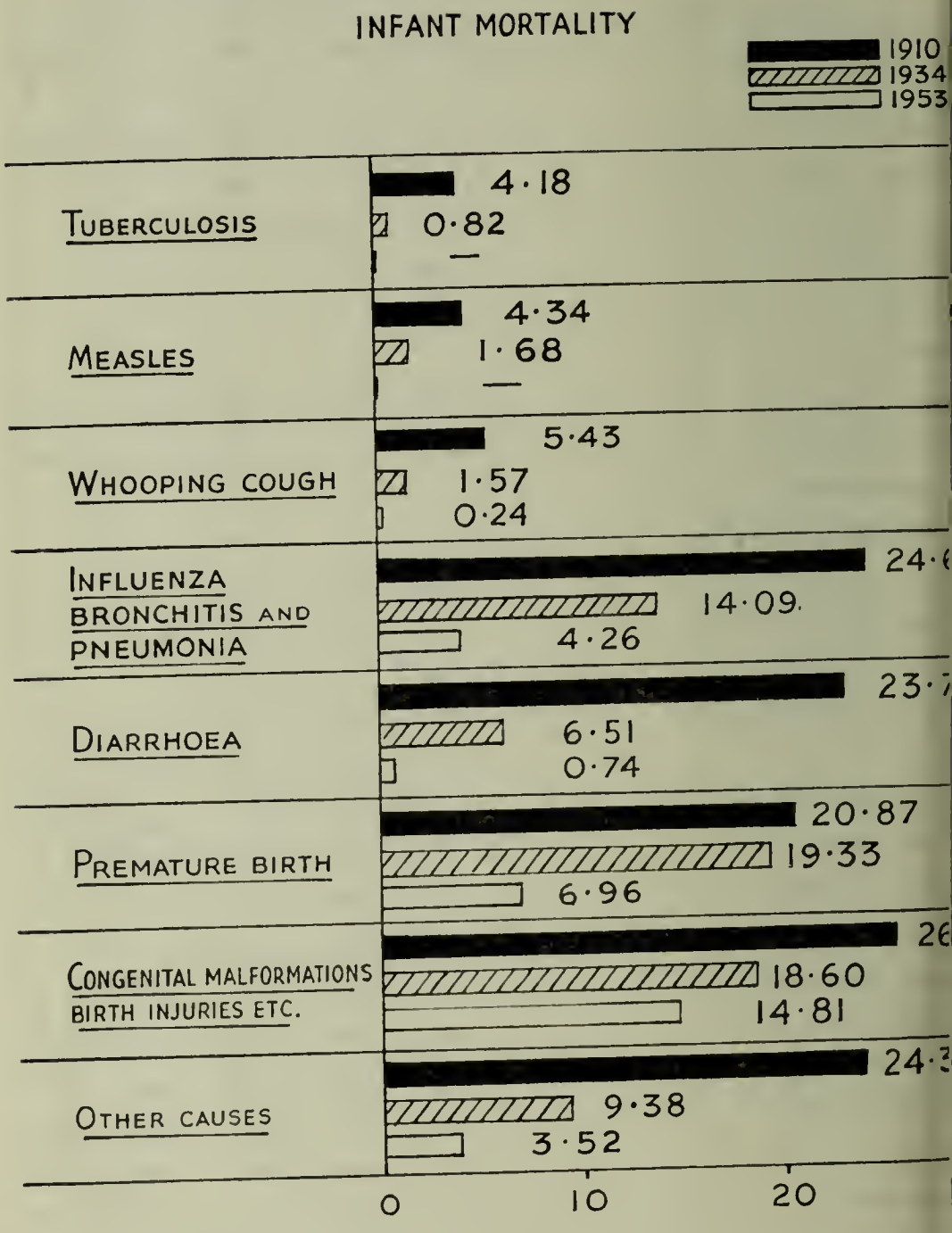


Infant mortality.

Deaths from various causes per 1,000 live births.

1949–53.

Cause of death	Rate per 1,000 live births				
	1949	1950	1951	1952	1953
auses	38·24	37·87	35·29	34·28	30·53
rculosis respiratory	0·08	..	0·16	..	..
,, other	0·23	0·16	0·16	0·08	..
litic diseases	0·08	0·08	..	0·16	..
t fever	..	..	..	..	..
heria	..	..	..	..	..
ping cough	1·45	1·13	0·16	0·40	0·24
gococcal infections	0·30	0·16	0·08	..	0·24
poliomyelitis	..	..	..	..	..
infectious encephalitis	..	..	..	..	..
s	0·08	0·40	0·08	0·08	..
es of the nervous system	0·84	0·56	0·96	0·24	0·08
nza	0·23	..	0·24	..	0·08
ionia (over 4 weeks of age)	6·93	4·42	4·50	4·12	3·03
itis	0·91	1·13	1·29	0·81	1·15
respiratory diseases	0·15	0·16	0·24	0·24	0·33
oeal diseases	4·34	3·06	2·41	1·54	0·74
digestive diseases	0·53	0·64	0·32	0·57	0·74
itis and nephrosis	..	0·16	0·08	..	..
nital malformations	4·80	5·39	4·50	6·23	4·34
injuries	3·43	3·46	3·78	3·48	3·60
diseases of early infancy	5·48	7·96	8·60	7·36	6·87
urity, unqualified	5·33	6·51	4·82	6·95	6·96
ce	0·69	0·96	1·61	1·05	1·23
ner causes	2·36	1·53	1·30	0·97	0·90

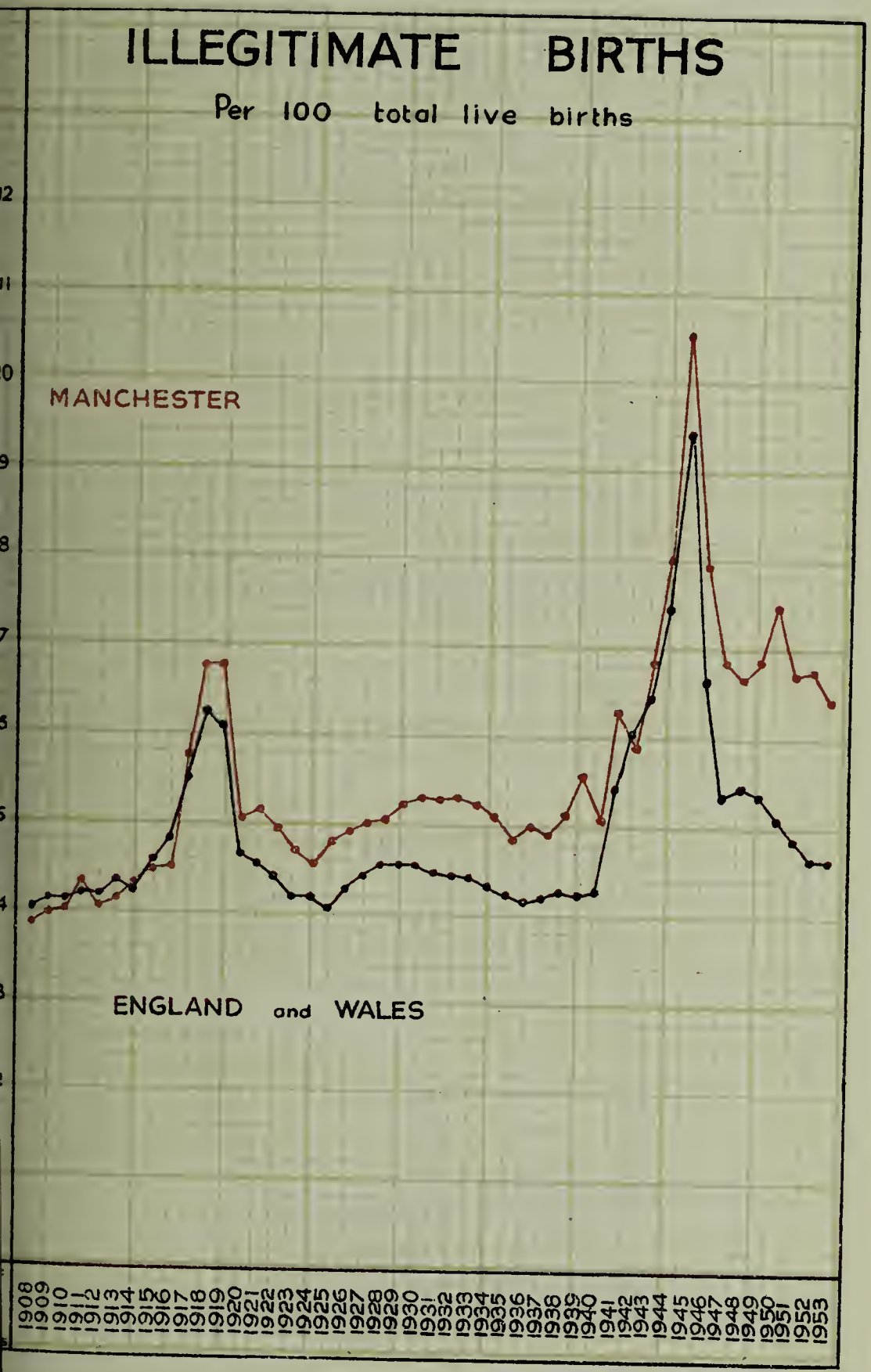

INFANT MORTALITY
1910
1934
1953
TUBERCULOSIS
4·18
0·82
MEASLES
4·34
1·68
WHOOPING COUGH
5·43
1·57
0·24
INFLUENZA BRONCHITIS AND PNEUMONIA
24·6
14·09.
4·26
DIARRHOEA
23·7
6·51
0·74
PREMATURE BIRTH
20·87
19·33
6·96
CONGENITAL MALFORMATIONS BIRTH INJURIES ETC.
26
18·60
14·81
OTHER CAUSES
24·3
9·38
3·52
0
10
20

Deaths under one year of age from diarrhoea, congential malformations, diseases of early infancy and other causes 1939–1953

Year	Diarrhoea		Congenital malformations		Injury at birth		Atelectasis		Others of early infancy		Immaturity unqualified		Other causes		Total Deaths	Infant mortality rate per 1,000 live births
	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births		
1939.. ..	60	5.8	83	8.0	31	3.0	29	2.8	47	4.5	161	15.5	223	21.5	634	61.1
1940.. ..	70	6.7	92	8.9	25	2.4	16	1.5	56	5.4	146	14.1	324	31.2	729	70.2
1941.. ..	109	11.1	81	8.2	23	2.3	22	2.2	44	4.5	176	17.9	377	38.3	832	84.5
1942.. ..	88	8.6	86	8.4	20	1.9	19	1.8	43	4.2	187	18.2	220	21.4	663	64.5
1943.. ..	85	7.6	80	7.2	36	3.2	12	1.1	49	4.4	167	14.9	252	22.5	681	60.9
1944.. ..	72	5.9	82	6.7	28	2.3	18	1.5	49	4.0	164	13.4	241	19.8	654	53.6
1945.. ..	83	7.3	82	7.2	42	3.7	24	2.1	41	3.6	129	11.4	233	20.5	634	55.8
1946.. ..	167	12.0	118	8.4	40	2.9	47	3.4	38	2.7	193	13.8	287	20.5	890	63.7
1947.. ..	223	14.1	90	5.7	37	2.3	57	3.6	49	3.1	181	11.4	309	19.6	946	59.8
1948.. ..	57	4.1	72	5.2	45	3.3	49	3.6	22	1.6	104	7.5	232	16.8	581	42.1
1949.. ..	57	4.3	63	4.8	45	3.4	47	3.6	25	1.9	70	5.3	195	14.9	502	38.2
1950.. ..	38	3.0	67	5.4	43	3.5	58	4.7	41	3.3	81	6.5	143	11.5	471	37.9
1951.. ..	30	2.4	56	4.5	47	3.8	73	5.9	34	2.7	60	4.8	139	11.2	439	35.3
1952.. ..	19	1.5	77	6.2	43	3.5	65	5.3	26	2.1	86	7.0	108	8.7	424	34.3
1953.. ..	9	0.7	53	4.3	44	3.6	51	4.2	33	2.7	85	7.0	98	8.0	373	30.5

Legitimate and illegitimate live births and deaths of infants under one year of age. From Registrar-Generals returns.

Year	LIVE BIRTHS					DEATHS UNDER ONE YEAR OF AGE								
						Number			Rate per 1,000 related live births					
												England and Wales		
	Legitimate	Illegitimate	Total	Illegitimate percentage of total live births	Illegitimate percentage of total live births England & Wales	Legitimate	Illegitimate	Total	Legitimate	Illegitimate	Total	Legitimate	Illegitimate	Total
1914	17,972	807	18,779	4.30	4.25	2,218	205	2,423	123.41	254.03	129.03	100.1	206.6	104.6
1915	15,956	740	16,696	4.43	4.45	1,959	182	2,141	122.78	245.95	128.24	105.4	208.3	109.7
1916	14,901	696	15,597	4.46	4.80	1,578	159	1,737	105.90	228.45	111.37	86.6	183.8	91.2
1917	12,195	742	12,937	5.74	5.56	1,262	176	1,438	103.48	237.20	111.15	90.3	201.1	96.5
1918	12,053	873	12,926	6.75	6.21	1,201	180	1,381	100.00	206.19	106.83	91.3	185.6	97.2
1919	12,758	928	13,686	6.78	6.05	1,175	160	1,333	91.94	172.41	97.40	83.7	172.8	89.1
1920	18,253	960	19,213	4.99	4.62	1,169	213	1,882	64.04	221.88	97.95	76.2	156.1	79.9
1921	16,647	902	17,549	5.14	4.52	1,542	171	1,713	92.63	189.58	97.61	79.2	158.3	82.8
1922	15,013	774	15,787	4.90	4.38	1,375	150	1,525	91.59	193.80	96.60	74.2	138.7	77.0
1923	14,677	711	15,388	4.62	4.16	1,243	117	1,360	84.69	164.56	88.35	66.6	131.8	69.4
1924	13,826	657	14,483	4.54	4.15	1,316	138	1,454	95.18	210.05	100.39	72.6	133.0	75.1
1925	13,493	669	14,162	4.72	4.07	1,251	113	1,364	92.72	168.91	96.31	72.5	135.6	75.0
1926	13,290	679	13,969	4.86	4.26	1,116	100	1,216	83.97	147.28	87.05	67.6	129.6	70.2
1927	12,388	648	13,036	4.97	4.35	1,032	90	1,122	83.31	138.89	86.07	67.4	119.8	69.7
1928	12,256	646	12,902	5.01	4.50	1,084	95	1,179	88.44	147.06	91.38	62.7	114.8	65.1
1929	12,380	678	13,058	5.19	4.55	1,144	128	1,272	92.41	188.79	97.41	71.9	125.9	74.4
1930	12,178	673	12,851	5.24	4.57	881	114	995	72.34	169.39	77.43	57.8	104.7	60.0
1931	11,694	643	12,337	5.21	4.44	956	93	1,049	81.75	144.64	85.03	64.3	110.7	66.3
1932	11,206	619	11,825	5.24	4.39	934	81	1,015	83.35	130.86	85.83	62.9	112.2	65.0
1933	10,582	574	11,156	5.15	4.37	769	65	834	72.67	113.24	74.76	61.7	107.5	63.7
1934	10,974	581	11,555	5.03	4.31	742	56	798	67.61	96.39	69.06	56.9	95.4	58.6
1935	10,842	537	11,379	4.72	4.19	757	52	809	69.82	96.83	71.09	55.5	89.5	56.9
1936	10,681	550	11,231	4.90	4.11	816	47	863	76.40	85.45	76.84	57.3	88.0	58.5
1937	10,268	518	10,786	4.80	4.15	770	53	823	74.99	102.32	76.30	56.3	88.1	57.6
1938	10,468	557	11,025	5.05	4.25	702	59	761	67.06	105.92	69.03	51.4	80.8	52.7
1939	9,807	571	10,378	5.50	4.19	587	47	634	59.85	82.31	61.09	48.6	89.8	50.4
1940	9,873	515	10,388	4.96	4.26	677	52	729	68.57	100.97	70.18	55.6	82.4	55.8
1941	9,239	610	9,849	6.19	5.36	767	65	832	83.02	106.56	84.47	58.8	82.3	58.8
1942	9,680	596	10,276	5.80	6.00	621	42	663	64.15	70.47	64.52	49.2	75.0	49.3
1943	10,431	754	11,185	6.74	6.38	625	56	681	59.92	74.27	60.88	47.6	71.4	49.0
1944	11,239	965	12,204	7.91	7.34	577	77	654	51.34	79.79	53.59	43.7	68.5	44.5
1945	10,175	1,187	11,362	10.45	9.33	557	77	634	54.74	64.87	55.80	44.1	64.8	47.0
1946	12,874	1,095	13,969	7.84	6.57	798	92	890	61.99	84.02	63.71	41.6	60.1	40.9
1947	14,760	1,070	15,830	6.76	5.29	859	87	946	58.20	81.31	59.76	40.4	58.0	41.8
1948	12,886	908	13,794	6.58	5.41	524	57	581	40.66	62.77	42.12	33.3	45.3	34.5
1949	12,243	886	13,129	6.75	5.34	461	41	502	37.65	46.28	38.24	31.7	44.8	32.7
1950	11,523	913	12,436	7.34	5.06	433	38	471	37.58	41.62	37.87	29.1	39.4	29.8
1951	11,616	822	12,438	6.58	4.84	407	32	439	35.03	38.93	35.29	29.2	38.5	29.6
1952	11,549	818	12,367	6.61	4.60	398	26	424	34.46	31.78	34.28	27.2	34.9	27.6
1953	11,450	768	12,218	6.29	4.60	352	21	373	30.74	27.34	30.53	*	*	26.8


ILLEGITIMATE BIRTHS
Per 100 total live births
MANCHESTER
ENGLAND and WALES
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953

also the proportion of mortality among infants of both classes under one year of age.

(*Figures compiled by the Medical Officer of Health.*)

WARDS	Live births				Deaths under 1 Year of Age					
	Total	Legitimate	Illegitimate	% Illegitimate to total live births	Total	Legitimate	Illegitimate	Rate per 1000 live births	Rate per 1000 live births legitimate	Rate per 1000 live births illegitimate
City of Manchester ..	12218	11450	768	6·29	373	352	21	30·53	30·74	27·34
Alexandra Park	218	206	12	5·50	5	5	—	22·94	24·27	—
All Saints..	509	445	64	12·57	18	14	4	35·36	31·46	62·50
Ardwick	455	424	31	6·81	12	12	—	26·37	28·30	—
Barlow Moor	180	171	9	5·00	2	2	—	11·11	11·70	—
Beswick	371	359	12	3·23	9	8	1	24·26	22·28	83·33
Blackley	366	353	13	3·55	18	17	1	49·18	48·16	76·92
Bradford	429	411	18	4·20	14	13	1	32·63	31·63	55·55
Burnage	208	199	9	4·33	4	2	2	19·23	10·05	222·22
Cheetham	233	219	14	6·01	12	12	—	51·50	54·79	—
Chorlton-cum-Hardy	167	151	16	9·58	8	8	—	47·90	52·98	—
Collegiate Church	276	240	36	13·04	8	7	1	28·99	29·17	27·78
Crumpsall	282	265	17	6·03	6	6	—	21·28	22·64	—
Didsbury	218	210	8	3·67	3	3	—	13·76	14·29	—
Gorton North	360	342	18	5·00	17	17	—	47·22	49·71	—
Gorton South	274	265	9	3·28	11	11	—	40·15	41·51	—
Harpurhey	349	328	21	6·02	8	8	—	22·92	24·39	—
Levenshulme	239	226	13	5·44	3	3	—	12·55	13·27	—
Lightbowne	275	265	10	3·64	5	5	—	18·18	18·87	—
Longsight	235	218	17	7·23	9	9	—	38·30	41·28	—
Miles Platting	293	284	9	3·07	12	12	—	40·96	42·25	—
Moss Side East	471	401	70	14·86	17	14	3	36·09	34·91	42·86
Moss Side West	387	356	31	8·01	11	8	3	28·42	22·47	96·77
Moston	297	291	6	2·02	8	8	—	26·94	27·49	—
New Cross	327	306	21	6·42	6	6	—	18·35	19·61	—
Newton Heath	285	275	10	3·51	6	5	1	21·05	18·18	100·00
Newtown	489	464	25	5·11	26	25	1	53·17	53·88	40·00
Northenden	416	399	17	4·09	18	16	2	43·27	40·10	117·65
Old Moat	201	195	6	2·98	4	4	—	19·90	20·51	—
Openshaw..	345	332	13	3·77	9	9	—	26·09	27·11	—
Rusholme	218	207	11	5·04	4	4	—	18·35	19·32	—
St. George's	453	409	44	9·71	14	13	1	30·91	31·78	22·73
St. Luke's	427	367	60	14·05	13	13	—	30·44	35·42	—
St. Mark's	356	335	21	5·90	6	6	—	16·85	17·91	—
St. Peter's	181	155	26	14·36	7	7	—	38·67	45·16	—
Withington	196	186	10	5·10	5	5	—	25·51	26·88	—
Wythenshawe	1232	1191	41	3·33	35	35	—	28·41	29·39	—

Stillbirths, neo-natal deaths, deaths at four weeks to one year of age, and infant death rate, 1934-1953.

Year	Total live and stillbirths	Stillbirths		Neo-natal deaths		Deaths, 4 Weeks—1 Year		Deaths under 1 year and stillbirths		Infant death rate per 1,000 live births
		Number of stillbirths	Rate per 1,000 live and stillbirths	Number of neo-natal deaths, 0–4 weeks	Rate per 1,000 total live births	Number of deaths, 4 weeks–1 year	Rate per 1,000 total live births	Number of deaths under 1 year and stillbirths	Rate per 1,000 total live and stillbirths	
1934	12,090	535	44·25	390	33·75	408	35·31	1,333	110·26	69·06
1935	11,925	546	45·79	381	33·48	428	37·61	1,355	113·63	71·09
1936	11,762	531	45·15	385	34·28	478	42·56	1,394	118·52	76·84
1937	11,254	468	41·59	381	35·32	442	40·98	1,291	114·71	76·30
1938	11,532	507	43·96	351	31·84	410	37·19	1,268	109·95	69·03
1939	10,870	492	45·26	321	30·93	313	30·16	1,126	103·59	61·09
1940 . ..	10,866	478	43·99	295	28·40	434	41·78	1,207	111·08	70·18
1941	10,249	400	39·03	292	29·65	540	54·82	1,232	120·21	84·47
1942	10,719	443	41·33	304	29·58	359	34·94	1,106	103·18	64·52
1943	11,591	406	35·02	306	27·36	375	33·52	1,087	93·77	60·88
1944	12,571	367	29·19	315	25·81	339	27·78	1,021	81·22	53·59
1945	11,734	372	31·70	311	27·37	323	28·43	1,006	85·73	55·80
1946 .. .	14,414	445	30·87	474	33·93	416	29·78	1,335	92·62	63·71
1947	16,257	427	26·27	466	29·44	480	30·32	1,380	84·89	59·76
1948	14,170	376	26·53	274	19·85	307	22·26	957	67·54	42·12
1949	13,460	331	24·59	242	18·43	260	19·80	833	61·88	38·24
1950	12,769	333	26·08	263	21·15	208	16·72	804	62·96	37·87
1951	12,757	319	25·01	251	20·18	188	15·11	758	59·42	35·29
1952	12,716	349	27·45	269	21·75	155	12·53	773	60·78	34·28
1953	12,573	355	28·24	255	20·87	118	9·66	728	57·90	30·53

PUERPER AND OST ABOR SEPSIS			
er s	Rate per 100 births	R per po	
	1·38	0·	
	1·86	0·	
	1·35	0·	
	1·24	0·	
	1·16	0·	
	2·41	0·	
	2·34	0·	
	1·94	0·	
	1·96	0·	
	1·30	0·	
	2·14	0·	
	1·84	0·	
	2·15	0·	
	2·07	0·	
	2·09	0·	
	1·84	0·	
	2·52	0·	
	†1·39	0·	
	1·61	0	
	1·70	0	
	1·32	0	
	1·93	0	
	1·36	0	
	1·16	0	
	1·47	0	
	0·73	0	
	0·83	0	
	0·97	0	
	0·65	0	
	1·04	0	
	0·64		
	0·25		
	0·35		
	0·55		
	0·07		
	0·45		
	0·08		
	0·39		
	0·10		
	—		

ıal mortali

DIARRH (under 2	
Deaths	pe I
523	0
479	0
305	0
282	0
139	0
162	0
237	0
375	0
190	0
209	0
186	0
213	0
258	0
181	0
240	0
240	0
166	0
172	0
125	0
102	0
113	0
74	0
57	0
64	0
75	0
62	0
75	0
113	0
93	0
88	0
73	0
85	0
169	0
229	0
58	0
60	0
38	0
30	0
22	0
9	0

The following figures indicate the causes of deaths from the more common ases :—

	Years	
	1948–52 Average	1953
sles	8	2
ooping cough	15	4
rlet fever	—	—
htheria	1	1
uenza	93	102
umonia (all forms)	365	338
eric fever	—	—
rrhoeal disease	42	38
nonary tuberculosis	379	198

ultations.

5 consultation visits were made during the year by medical officers of the artment at the request of medical practitioners in the City in connection the diagnosis of cases of infectious disease in which the nature of the ss was in doubt.

Smallpox.

No case of smallpox occurred in Manchester during the year.

utions against smallpox.

he cases of variola minor which occurred in some of the surrounding icts of the city during the early part of the year had a considerable effect on Department's activities, and included the daily surveillance of contacts ing in Manchester and the increase in requests by general practitioners for ond opinion on cases occurring in their practice where there was an element ubt. One such case, a man aged 50 years, was removed to hospital for vation from one of the more thickly populated districts of the city, but nately was eventually considered not to be a case of smallpox. Never- ss, every possible precaution was taken at the time. Increased demands vaccination or re-vaccination were experienced, and to assist private itioners, a medical officer of the staff made house-to-house visits in the ty concerned and vaccinated any contacts whose working hours made it icticable for them to attend their doctor during surgery hours.

smallpox contact, a middle aged man resident in Halifax, developed cious symptoms and in consequence was removed to hospital in Halifax e, after a few days observation the diagnosis was not confirmed. In the time, as the patient had visited a speedway stadium in Manchester the day ous to his removal, special vaccination sessions were held at the stadium quarters for the convenience of some 75 members of the staff who were e to visit their own doctors owing to the irregularity of their working . General practitioners in the city were immediately circularised of the of the case and at the same time, reminded to be prepared for the possibility increase in the number of requests for vaccination.

Vaccination.

The number of infant vaccinations which, for the five years prior to 1 averaged 59·49 per cent of births and fell to 35.19 per cent at the end of 19 took an upward trend in 1953 when the number of children under 1 year age successfully vaccinated was 5,827, a percentage of 47·69 to the number live births. This figure is the highest since 1947 and may be attributed some extent, to the introduction, in the early part of the year, of special we vaccination sessions for mothers and infants at child welfare clinics.

Infant vaccination record forms received in the year from gen practitioners, and since the latter end of April, 1953, from clinics, were follows :—

General practitioners.		Child welfare clinics.	
Primary	3,285	Primary	2,275
Insusceptible	188	Insusceptible	146
Total	3,473	Total	2,421

The numbers of children successfully vaccinated in each of the 10 years, with percentages, are as follows :—

Year	Numbers of persons vaccinated					Numbers of live births	Percent vaccina under 1 to live
	under 1 year	1—4 years	5—14 years	15 years and over	Totals		
1944 ..	7,668		172		7,840	12,204	62·8
1945 ..	7,300		114		7,414	11,362	64·2
1946 ..	8,994		362		9,356	18,969	64·3
1947 ..	9,856		302		10,158	15,830	62·2
1948 ..	4,916		173		5,089	13,794	35·6
1949 ..	2,957	2,031	70	383	5,441	13,129	22·5
1950 ..	5,409	2,668	846	685	9,608	12,436	43·4
1951 ..	4,803	587	311	1,937	7,638	12,438	38·6
1952 ..	4,419	599	382	2,106	7,506	12,367	35·7
1953 ..	5,827	1,227	1,328	3,776	12,158	12,218	47·6

NOTE.—Percentages vaccinated under 1 year to live births for the years 1944 to 1948 were expressed in p reports, as percentages of the uncorrected live births.

Diphtheria.

40 patients were admitted to the isolation hospital with a prelim diagnosis of diphtheria and of this number 5 cases were subsequently confir In addition, there were two further cases, a girl aged 6½ years considered b doctor to be a very mild diphtheria and nursed at home, and a woman ag years who died on the day of her admission to one of the general hosp This total of 7 cases of diphtheria equals that for the year 1952, the lowest recorded in the City. One case, a girl aged 11½ years, had received a cou P.T.A.P. immunization in the latter part of 1950.

Pneumonia			Smallpox	Malaria (contracted in England & Wales)	Ophthalmia neonatorum	Pemphigus neonatorum	Puerperal pyrexia	Total cases	Rates per 1,000 population in wards
Broncho	Influenzal	Other							
116	**71**	**69**	—	—	**55**	**4**	**670**	**12365**	**17·62**
1	1	—	—	—	3	—	9	169	7·77
9	1	—	—	—	7	—	51	352	18·68
1	—	—	—	—	3	—	27	333	18·60
3	1	1	—	—	2	—	8	153	10·04
1	—	1	—	—	—	—	8	185	9·50
—	—	1	—	—	—	1	8	386	18·74
—	1	—	—	—	—	—	14	344	14·99
—	—	—	—	—	1	—	11	210	9·47
—	1	2	—	—	—	1	9	165	11·55
—	1	—	—	—	7	—	2	189	9·44
—	—	13	—	—	1	—	11	304	21·90
—	1	2	—	—	—	1	8	397	18·03
—	—	—	—	—	1	—	4	160	9·25
5	6	7	—	—	3	—	10	501	21·79
2	3	—	—	—	1	—	7	245	14·00
1	—	—	—	—	—	—	4	375	20·01
—	—	—	—	—	—	—	10	171	8·77
1	—	—	—	—	—	—	4	427	21·03
2	—	1	—	—	1	—	17	170	10·79
5	—	2	—	—	1	—	6	339	22·89
2	—	—	—	—	3	—	39	344	17·74
3	1	—	—	—	4	—	23	249	13·44
—	1	1	—	—	—	1	6	461	22·53
10	1	1	—	—	1	—	17	338	23·40
13	11	2	—	—	—	—	9	456	23·87
7	—	7	—	—	—	—	16	603	30·81
7	8	4	—	—	3	—	12	571	24·29
3	1	—	—	—	3	—	7	298	17·45
2	13	4	—	—	—	—	8	419	18·36
3	—	—	—	—	1	—	6	154	8·95
5	—	1	—	—	1	—	35	303	15·67
3	—	—	—	—	3	—	42	281	15·39
—	2	—	—	—	1	—	24	353	16·47
7	1	2	—	—	2	—	11	155	13·22
1	—	3	—	—	1	—	8	184	12·03
6	2	5	—	—	1	—	43	1433	30·12
3	12	9	—	—	—	—	136	188	—

Totals

	Under 1		1–		2–		5–		15–		Totals	
	P	S	P	S	P	S	P	S	P	S	P	S
ary	432	408	27	26	25	25	15	15	61	59	560	533
uary	318	304	15	15	23	23	18	16	68	63	442	421
:h	444	410	27	27	58	53	51	50	278	273	858	813
l	894	811	151	140	252	245	811	653	1023	978	3,131	2.827
, ...	540	508	70	69	78	77	130	126	180	169	998	949
e	549	535	49	47	49	46	28	27	71	68	746	723
y	569	551	35	35	40	40	15	14	31	30	690	670
gust	442	422	41	41	32	32	24	24	41	39	583	558
otember	605	575	35	33	35	35	5	4	49	46	729	693
tober	597	558	44	43	41	41	10	10	33	29	725	681
vember..	514	495	32	32	47	44	10	9	44	42	647	622
cember	263	249	14	14	9	9	5	5	21	18	312	295
	5,167	5,826	543	522	689	670	1,122	953	1,900	1,814	10,421	9,785

Totals

	Under 1		1–		2–		5–		15–		Totals	
	P	S	P	S	P	S	P	S	P	S	P	S
anuary	—	—	—	—	2	2	7	7	60	59	69	68
ebruary	—	—	—	—	2	2	1	1	38	36	41	39
Iarch	—	—	—	—	4	4	13	13	582	532	599	549
pril	—	—	1	1	12	12	250	245	875	831	1138	1089
Iay	—	—	1	1	7	5	77	65	169	157	254	228
une	1	1	—	—	1	1	9	9	85	79	96	90
uly	—	—	—	—	2	2	14	12	89	84	105	98
ugust	—	—	—	—	—	—	4	4	33	32	37	36
ptember	—	—	—	—	2	2	10	10	49	47	61	59
ctober	—	—	—	—	2	1	6	6	48	46	56	53
ovember..	—	—	—	—	—	—	2	2	45	43	47	45
ecember	—	—	—	—	2	2	1	1	16	16	19	19
	1	1	2	2	36	33	394	375	2.89	1962	2522	2373

he following figures show the number of cases notified and accepted as heria each year for the last 10 years :—

Year	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
cases	266	302	259	80	43	22	22	10	7	7

lity.

he case mortality in 1953 was 14.29 per cent., as compared with an average .4 for the last 5 years. Manchester case mortality rates per cent. in age s have been as follows :—

	0–5 years	5–10 years	10–15 years	15 years and over
0	33·5	17·8	6·0	4·5
3	2·4	3·8	1·6	2·5
rcentage reduction	93	79	73	44

riers" and the virulence test.

the total number of formal notifications received it was found, on igation, that 36 related to persons who were merely "carriers" of heria.

9 swabs were taken from the throats and noses of all members of families positive results had been obtained from the patients ; all proved negative.

of anti-toxin.

nder the National Health Service Acts, the responsibility for the provision phtheria anti-toxin for use by general practitioners, when required, has aken over by the Manchester Regional Hospital Board. Arrangements ue for supplies of anti-toxin to be available at certain hospitals and fire as in the City.

heria immunization.

he Department's basic scheme for the immunization of the child ation against diphtheria continued to operate as in former years and a evel of immunized children was maintained. Immunization is recommended a child is eight months old and the health visitor gives advice to parents in natter during the early months of the child's life and secures if possible, nt for immunization of the child ; suitable descriptive literature is left with rents in which is indicated places where children can receive protection. pplement this valuable personal approach, "First Birthday Cards" are eminding parents of the importance of immunization at this stage. At mmencement of school life a further attempt is made by the teaching and al staffs to secure the protection of non-immunized children at school . "Booster" or reinforcing injections are given normally when the nized child attends school at the age of 5 years and again at the age of rs.

addition to the facilities provided at child welfare centres, day nurseries nics in the Health Department, the mobile immunization unit, which has n operation for the past eight years, continued its good service in all areas City. Use of the unit resulted in the complete immunization of 3,393, 92 per cent. of the total number of children immunized in the City during ar.

11,266 Manchester persons received a complete course of diphtheria a injections ; 465 others received an incomplete course and 10,898 were a reinforcing injection. In addition, 147 non-Manchester residents re a complete course, and 280 a reinforcing injection. The numbers distributed as follows :—

Number of Manchester persons immunized and number of immunizations effec

	Numbers having received complete course of antigen	Numbers having received incomplete course of antigen	Numbers received rei course antig
Schools and school clinics ..	2,521	214	9,
Child welfare centres	3,23[illegible]	119	7
Day nurseries	276	8	1
Hospitals	445	29	
Health Office	7	—	
Mobile unit	3,393	75	1
General practitioners	1,315	20	2
Manchester persons immunized by outside authorities ..	73	—	
Persons from outside authorities immunized in Manchester	147	—	2
Total Manchester persons immunized	11,266	465	10,8
Total immunizations effected in Manchester	11,340	465	11,1

8,755 children under five years of age and 2,436 children of school total of 11,191 children) completed a full course of immunization. close of the year, 79·24 per cent of Manchester children had been immu the percentages in age groups being 64·64 in the group 0–4 years and 87 the group 5–14 years.

Antigens used in immunizing Manchester pre-school and school childre

Age group	Numbers having received complete course of injections	Antigens used		
		A.P.T.	T.A.F.	P.T
Under 1 year	3,103	3,011	—	
1—4 years	5,647	5,613	—	
5—14 years	2,436	2,421	9	
Totals—under 15 years ..	11,191	11,045	9	1

Although Schick testing is not practised as a routine in connectio the greater part of the scheme, such tests were carried out largely among h patients and staff. The number of primary tests performed during the y persons not previously immunized was 121, of which 12 gave a positive and 109 were negative. 482 posterior tests were carried out on p previously immunized of which 59 gave positive and 423 negative resu

The following table illustrates the progress of the immunization s since its inception :—

Illustrating the progress of the immunization scheme since its inception.

Numbers of Manchester persons, in age groups, having had a complete course of injections.

	1928 to 1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	
Under 1 year	3489	822	1071	915	740	503	1497	1761	2298	1767	2383	2540	3349	4582	4678	3863	3281	3411	3108	
1 year ..	4543	1328	1169	1228	965	912	1882	2411	3557	2927	4379	4202	3444	4747	3994	3222	4133	3931	3848	
2 years ..	3744	863	890	894	576	409	1295	1292	1567	342	1258	1517	574	1139	1134	837	842	1093	940	
3 ,, ..	3702	782	901	824	476	272	1065	1140	1504	168	554	1045	280	369	439	405	462	541	461	
4 ,, ..	3844	801	906	856	475	238	1057	920	1710	145	342	600	202	220	189	207	420	466	398	Total under 5 years at end of 1963. 37750
5 ,, ..	4312	702	951	866	464	192	1226	473	1747	182	264	333	100	132	116	170	444	603	583	
6 ,, ..	4341	772	972	878	447	222	1241	379	2165	199	233	269	77	91	74	171	483	381	467	
7 ,, ..	4235	751	890	832	382	195	1215	236	1577	206	139	215	52	68	58	171	515	310	225	
8 ,, ..	4291	810	857	711	408	179	1137	176	931	106	101	189	43	63	33	141	640	337	199	
9 ,, ..	4099	804	678	583	336	162	1036	112	805	98	68	143	36	54	31	159	584	363	164	Total 5–10 years. 49213
10 ,, ..	3550	923	698	613	308	137	1050	117	864	97	87	86	28	37	23	216	749	380	198	
11 ,, ..	2858	703	459	444	274	86	933	121	595	72	71	89	15	27	16	165	645	354	149	
12 ,, ..	2180	772	419	395	218	43	1038	131	465	32	67	61	22	18	7	186	702	426	160	
13 ,, ..	1739	615	424	396	259	39	502	100	436	33	50	36	11	15	5	145	747	398	166	
14 ,, ..	603	96	117	79	49	11	219	53	51	12	14	17	6	11	5	126	567	260	125	Total 10–15 years. 40938
15 years and over ..	1895	917	444	240	102	105	309	221	298	139	210	155	112	108	47	60	155	68	75	Total 15 years & over 127008
Totals 1928-53	53425	12461	11846	10754	6479	3705	16702	9643	20570	6525	10220	11497	8351	11681	10849	10244	15369	13322	11266	254909

The totals at the end of 1953 indicate only approximately the immune population since no account is taken of any deaths that may have ensued amongst the immunized children.

Meningococcal infection.

38 notifications were received. Of this number 14 were from g practitioners and these cases were removed to the isolation hospital ; them were confirmed subsequently. 24 cases were notified from and t in various hospitals in the City, thus making a total of 33 confirmed ca meningococcal infection.

There were 6 deaths from the disease, giving a case mortality rate o per cent., as compared with a rate of 8.7 per cent. in 1952.

As regards seasonal prevalence, it will be seen from the following tabl approximately 70 per cent. of the cases occurred in the first six months year, also that twice as many females as males were affected.

Cases of meningococcal infection in quarters of the year, age groups and sexes.

	1st quarter		2nd quarter		3rd quarter		4th quarter		T
	M	F	M	F	M	F	M	F	M
Under 5 years	3	6	3	6	2	3	—	3	8
5— 9 ,, ...	—	1	1	1	—		—		1
10—14 ,, ...	—		—		—		—		
15—19 ,, ...	—		—		—		—		
20—24 ,, ...	—		—		—		—		
25—34 ,, ...	—		—		—		—		
35 and over	—	1	1	—	1	1	—		2
All ages	3	8	5	7	3	4	—	3	11

Poliomyelitis.

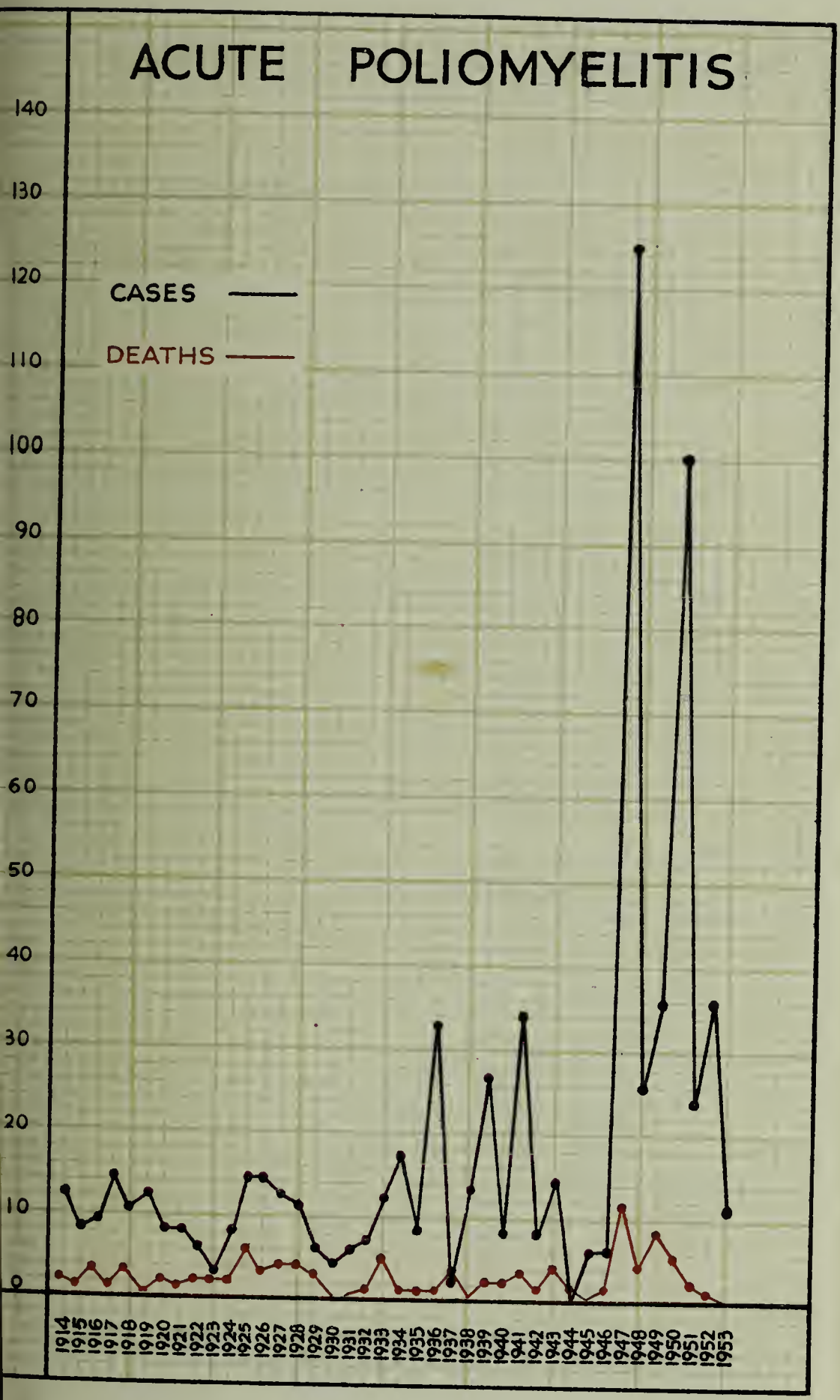
The number of cases of acute poliomyelitis was considerably less th previous years. Of the 37 cases notified 7 were confirmed as pa poliomyelitis and 4 non-paralytic, with no deaths. As will be seen fro following table, the disease showed its usual seasonal incidence in the m of July, August and September, when 55 per cent. of the total cases occ compared with 51 per cent. in the corresponding period of 1952.

Months of onset of confirmed cases :—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	No
Paralytic	—	—	—	—	—	1	2	2	1	1	—
Non-paralytic ..	—	—	—	—	2	1	1	—	—	—	—

The sex and age distributions of the cases were as follows :—

		-1	1-2	3-4	5-9	10-14	15-24	25-
Paralytic	Male	—	1	—	1	—	1	1
	Female	—	1	1	—	—	—	1
Non-paralytic	Male	—	—	1	—	1	1	1
	Female	—	—	—	—	—	—	—
Total	Male	—	1	1	1	1	2	2
	Female	—	1	1	—	—	—	1


ACUTE POLIOMYELITIS
CASES
DEATHS
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
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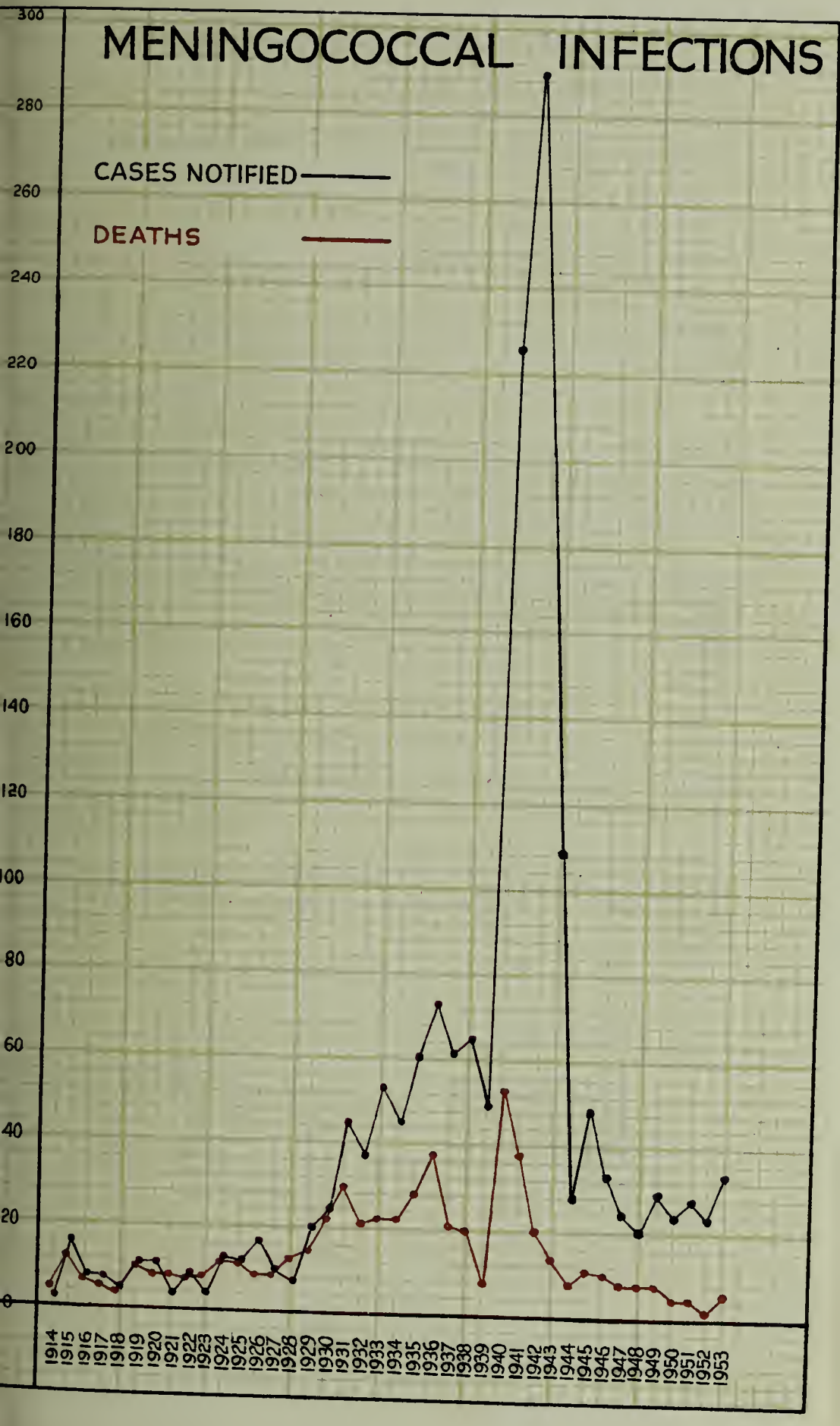
1953


MENINGOCOCCAL INFECTIONS
CASES NOTIFIED
DEATHS
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953

The following table shows the incidence of poliomyelitis and deaths during past five years :—

Age groups	Cases															Deaths													
	1953			1952			1951			1950			1949			1953			1952			1951			1950			1949		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
year	–	–	–	2	2	–	1	1	5	–	5	3	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
s	1	1	2	4	5	9	2	1	3	14	10	24	8	4	12	–	–	–	–	–	–	1	–	1	–	–	–	1	–	1
s	1	1	2	1	6	7	1	7	8	7	6	13	2	3	5	–	–	–	–	–	–	–	–	–	–	1	1	1	2	3
s	1	–	1	6	3	9	2	2	4	13	12	25	2	3	5	–	–	–	1	–	1	–	–	–	–	1	1	–	–	–
ars	1	–	1	1	–	1	–	1	1	7	5	12	3	–	3	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
ars	2	–	2	3	1	4	5	–	5	5	6	11	1	2	3	–	–	–	–	–	–	–	–	–	–	1	1	1	1	2
er	2	1	3	1	2	3	–	1	1	5	3	8	2	2	4	–	–	–	–	–	–	1	1	1	–	1	1	1	2	
Total	8	3	11	16	19	35	10	13	23	56	42	98	21	14	35	–	–	–	1	–	1	1	1	2	1	4	5	4	4	8

iomyelitis research, 1953 (Investigation III).

request was received from the Medical Research Council, and approved Health Committee, to co-operate in an aim to study the pathogenis of nyelitis in family contacts of *paralytic* cases, with special reference to the ence of viraemia, the excretion of virus in stools and the appearance of dies in the serum. For this purpose, material was required to be ed from families where there were *at least two children under 15 years other he patient* with no suspicious illnesses immediately preceding the onset ptons in the case. In such an event, arrangements were to be made for llection of the following specimens from *all members, including adults, an the patient* :—

. 10 c.c.'s of blood at the earliest possible moment.

. 10 c.c.'s of blood 21 days later.

. Specimens of faeces, at the earliest possible moment after the case had been diagnosed and again 7, 14 and 21 days later (4 sets of specimens altogether).

suitable case occurred ; the procedure described was followed and the l Research Council was supplied with specimens from eight contacts, ng the patient.

iculars of the 11 cases are given below :—

City ward	Onset	Notified	Site of paralysis	Condition—February, 1954
ythenshawe	13th May	21st May	None	Recovered ; no paralysis.
dwick ..	10th May	28th May	None	Recovered ; no paralysis.
umpsall ..	4th June	8th June	Hip and thigh	Improved ; attending school ; no calipers.
George's..	27th June	16th July	None	Recovered ; no paralysis.
ckley ..	4th July	16th July	Left leg	Much improved ; no calipers.
umpsall ..	9th July	21st July	Shoulder	Improved ; resumed employment.
sholme ..	9th July	23rd July	None	Improved ; attending school.
d Moat ..	5th Aug.	14th Aug.	Right shoulder and arm	Good progress ; no paralysis.
rlow Moor	14th Aug.	26th Aug.	Right shoulder and arm	Good progress ; no paralysis.
rthenden ..	5th Sept.	10th Sept.	Both legs and shoulder	Improving ; massage treatment.
enshaw ..	23rd Oct.	27th Oct.	Lower leg	Improving ; wears calipers.

Table showing the distribution of cases in City wards, and health of patients in February, 1954.

CITY WARD	Notifications		Confirmed cases		Paralytic		Non-paralytic		Deaths		Condition—February, 1954				Unobtained
											Paralytic		Recovered; no paralysis		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Alexandra Park	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
All Saints	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ardwick	2	—	1	—	—	—	1	—	—	—	—	—	1	—	—
Barlow Moor	1	—	1	—	1	—	—	—	—	—	—	—	1	—	—
Beswick	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blackley	1	1	—	1	—	1	—	—	—	—	—	—	—	1	—
Bradford	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burnage	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cheetham	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chorlton-cum-Hardy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Collegiate Church	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crumpsall	2	—	2	—	2	—	—	—	—	—	—	—	2	—	—
Didsbury	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gorton North	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Gorton South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Harpurhey	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Levenshulme	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Lightbowne	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Longsight	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Miles Platting	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Moss Side East	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Moss Side West	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Moston	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Cross	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Newton Heath	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Newtown	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Northenden	—	1	—	1	—	1	—	—	—	—	—	1	—	—	—
Old Moat	1	1	—	1	—	1	—	—	—	—	—	—	—	1	—
Openshaw	2	—	1	—	1	—	—	—	—	—	1	—	—	—	—
Rusholme	1	—	1	—	—	—	1	—	—	—	—	—	1	—	—
St. George's	1	—	1	—	—	—	1	—	—	—	—	—	1	—	—
St. Luke's	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Acute encephalitis (infective-post infectious).

One notification of acute encephalitis (infective) was received ; this related a male aged 20 years who died two days after admission to hospital.

Pneumonia.

There were 576 cases of pneumonia notified ; consisting of :—

Primary pneumonia	lobar	320	576
	lobular	116	
	unclassified	69	
Influenzal pneumonia		71	

All these cases were investigated by the epidemiology investigators ; 206 of em were treated in hospital.

There were 338 deaths, consisting of 79 lobar, 234 lobular and 25 unclassified ses. In addition, there were 39 deaths from influenza associated with eumonia.

Malaria.

No notification was received.

Anthrax.

One case of anthrax came to the notice of the Department in a man aged years, who was admitted to hospital on the 11th July, 1953, and died the lowing day. An inquest was held and a verdict of " anthrax contracted ring the course of his employment—accidental death " was returned. The st symptoms appear to have occurred on the 25th June, when a boil or buncle was noticed on the centre upper abdomen. He consulted his doctor, t did not complain of any other illness until the 7th or 8th July, when he in attended his doctor after the appearance of another boil or carbuncle on chest. He continued his employment during the whole of this period until July when he returned home complaining of pains from the boils and in stomach ; he remained at home until his removal to hospital. The man s employed as a motor-driver by an animal products manufacturer and his ies comprised collecting bones from butchers' shops in adjoining Lancashire tricts, and, on intermediate days, from railway waggons sent to the city, efly from the Yorkshire area. Samples were obtained for examination of scrapings from the lorry floor, (2) deposits of fat and debris from the lip of receiving hopper and (3) representative samples of bones from ten sacks, h negative results. The infected bed, bedding and certain clothing were noved for high pressure steam disinfection and some personal clothing was troyed. The lorry was disinfected with pure formaldehyde.

Measles and German measles.

It will be observed from the following table that measles was exceptionally valent during the early part of the year. The peak of the outbreak was ched in the week ended January 9th, when 458 cases were notified, following ich date there was a steady decline until the end of June, when the number of es occurring resumed a normal level.

Cases notified	1953				
	1st quarter	2nd quarter	3rd quarter	4th quarter	
MEASLES—					
By medical practitioners	3,693	1,992	211	44	
,, others (parents, health visitors and school authorities) ..	437	306	104	11	
Totals	4,130	2,298	315	55	
GERMAN MEASLES—					
By medical practitioners	165	235	71	79	
,, others (parents, health visitors and school authorities) ..	5	10	6	2	
Totals	170	245	77	81	

Whooping cough.

Whooping cough became compulsorily notifiable in October, 1939 ; b this date the source of notification was solely from the schools. Notifica received were as follows :—

1st quarter	2nd quarter	3rd quarter	4th quarter	Total
677	531	623	281	2,112

Incidence of whooping cough at age periods 0—5 and 5 years and over.

Disease	Under 5 years	5 years and over	Tota
Whooping cough	1,433	679	2,112

Whooping cough immunization.

The special scheme of immunization of children between the ages o months and four years against whooping cough which commer in January, 1951, in co-operation with the Medical Research Cou ended on the 31st December, 1952. Suitable children were ch for a " follow-up " of reactions and infections of those who compl a course of inoculations, and were kept under observation by a tra investigating staff who made routine monthly visits to the homes record relevant information required by the Medical Research Cou The total number visited in this group, to October, 1953, was 6

which 3,000 were considered to have completed the survey, leaving 3,116 to kept under observation until 30th June, 1954. The City Council agreed to proposal of the Health Committee that whooping cough immunization ould be continued, from 1st January, 1953, as part of the routine work of the alth Department, on similar lines to those approved for diphtheria immuni- on in accordance with Section 26 (2) of Part III of the National Health Service , 1946. Immunization against whooping cough thereupon became available nfant welfare clinics, day nurseries and at the central office from the beginning he year to children over 5 months and not exceeding 5 years of age who have suffered from the disease. In addition, since 1st April, 1953, general ctitioners, by arrangement with the Department, have been able to receive nunizing agents and are requested to furnish records of primary and forcing immunizations performed, on prescribed forms, when payment is le accordingly. 3,626 primary immunization courses were completed ; 0 in the authority's clinics, 89 in hospitals and, in the last nine months of year, 297 by general practitioners.

noculations are postponed in the case of a child who is suffering from any ss, including upper respiratory tract infections (e.g. severe catarrhal litions, influenza, etc.) or teething troubles, until the child has recovered. ddition, children who have been in known contact with whooping cough, ny infectious disease (measles, rubella, chickenpox, mumps, etc.) within weeks prior to the date of attendance at the clinic, are not inoculated. In instances the service is delayed for a period of four weeks from the date of known contact with the disease. Where a child has a previous personal ry of convulsions, fits, epilepsy, mental retardation, hydrocephalus, phalitis, meningitis, or if there is a history of any of these in the mother, r, brothers or sisters, no inoculations are done.

he recommended procedure is to give intramuscularly, in the left deltoid, doses each of 1 c.c. whooping cough vaccine at four-weekly intervals. n this interval cannot be adhered to, the maximum period between each ion is 3 months from the 1st to the 2nd inoculation and 6 months between nd and 3rd inoculation, after which it is considered advisable for the patient ommence the course of inoculations. A reinforcing injection of 1 c.c. is ated 3 years after the completion of the primary immunization course if ild is under 5 years of age.

Typhoid and Paratyphoid fever.

notifications were received, the diagnosis being subsequently corrected ases. Thus 2 cases occurred of which 1 was infected by B typhosus and 3 paratyphosus " B."

specimens of blood were submitted to the laboratory, by medical ioners, from patients with illnesses simulating typhoid and none gave e Widal reactions.

Dysentery.

The following table shows corrected notifications of cases of bac dysentery by quarters of the year and by sex (Sonne 429, Flexner 6 and cl diagnosis only, 26.) :—

	Males	*Females*	*Totals*
1st quarter	65	54	119
2nd quarter	92	83	175
3rd quarter	37	24	61
4th quarter	51	55	106
Totals	245	216	461

It will be observed in the table below that the biggest proportion of was in the under 5 age-group. This is accounted for by the fact that app mately 50 per cent. of cases occurred in outbreaks in day nurseries and c readily understood since such establishments afford opportunities fo spread of the disease ; all cases come to light due to the close supervisi the Department when an outbreak occurs. It is quite conceivable that occur in the adult age-groups which are not notified owing to the usually nature of the attack. Notifications of bacillary dysentery classified in va age groups are as follows :—

Age group	*Males*	*Females*	*Totals*
Under 5	172	150	322
5—14	43	22	65
Totals	215	172	387
15 and over	30	44	74
Totals	245	216	461

Scarlet fever.

968 cases of scarlet fever were notified ; 23.3 per cent of the cases hospitalised and case mortality was nil.

Food poisoning.

The most noteworthy outbreak of food poisoning was caused by the org Salmonella enteritidis var. danysz, which had its origin in virus baits l a mice-infested bakery.

Only two cases of illness came to the knowledge of the Medical Off Health ; both occurred about the same date, in a woman and a man at ad in Manchester which were 3½ miles apart. Similar symptoms of illnes experienced ; the woman remained at home but the man was hospi Both patients were attacked by an identical organism and had consumed slices about the same period. The investigations were directed to the of the confection.

Inquiries of the respective local retailers of the vanilla slices led through ealers to a wholesale bakery as the common source of supply. It was learned ubsequently that the bakery experienced a heavy infestation of mice about a ionth before the onset of illness in the patients concerned, and rodent operators ad been engaged to deal with them. Special baits of bread soaked in a meat roth containing Salmonella enteritidis var. danysz, were laid in the bakery out that time.

The Medical Officer of Health immediately requested the rodent contractors discontinue using virus baits of such a nature likely to cause illness in uman beings.

During the investigation a number of mice were trapped in the bakery and om the spleen of one of them Salmonella enteritidis var. danysz, was olated. The pathological examination of the mouse concerned was made out six weeks after the onset of the patients' illness. The actual contamination the vanilla slices by the mice was obscure, but there appeared little doubt at the infection had been conveyed by them.

Faecal specimens obtained from the bakery workers on examination gave egative results.

Brief details of the case are contained in the following schedule of food isoning incidents (see item No. 2) copied in the suggested form for annual turn to the Minister of Health as in Appendix D (ii) of the revised memo. 8/Med. 1949.

There was a noticeable reduction in the incidence of food poisoning brought the attention of the Medical Officer of Health in 1953, as compared with 952. Single cases investigated numbered 25 as against 54 in 1952. Outbreaks volving two or more cases were 15 as compared with 24 the previous year. cidents investigated and identified with food poisoning organisms were 30 as gainst 62 in 1952, and figures applied similarly to incidents investigated where rganisms were not found were 10 and 16 respectively.

Outbreak caused by		Cases		Illness—clinical features		
	Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity
1.	Cold roast lamb	Cl. welchii	—	50	16–17 hrs.	Abdominal pain, diarrhoea, shivering and general weakness	Mild to moderate
2.	Vanilla slice ..	S. enteritidis var. danysz	—	1	5–6 hrs.	Pyrexia, abdominal pain vomiting and diarrhoea	Moderate
	Vanilla slice ..	S. enteritidis var. danysz	—	1	19 hrs.	Pyrexia, abdominal pain, vomiting and diarrhoea	Moderate
3.	Not known ..	S. thompson	1	1	? 1 day	Diarrhoea, abdominal pain, anorexia (son) 1 case (father) symptomless	Moderate Mild
4.	Not known ..	S. bareilly	1	—	?	Vomiting, abdominal pain, anorexia, pyrexia	Moderate
5.	Not known ..	S. dublin	—	1	?	Loose stools, anorexia, diarrhoea	Very mild
6.	Not known ..	S. heidelberg	1	—	?	Abdominal pain, diarrhoea, pyrexia, vomiting	Moderate
7.	Custard	Staph. aureus	1	—	5 hrs.	Diarrhoea, vomiting, abdominal pain and anorexia	Moderate
8.	Not known ..	S. typhimurium.	—	1	?	Pyrexia, vomiting, anorexia, abdominal pain and diarrhoea	Moderate
9.	? Raw hen egg ..	S. typhimurium	1	—	few hours	Languid, vomiting, pyrexia, anorexia, diarrhoea	Moderate
	Not known ..	S. typhimurium	1	—	?	Pyrexia, anorexia, vomiting, diarrhoea	Mild
11.	Not known ..	S. typhimurium	1	—	?	Pyrexia, anorexia, vomiting, diarrhoea	Moderate
12.	?Raw egg albumen	S. typhimurium	1	—	17 hrs.	Pyrexia, abdominal pain, vomiting, diarrhoea	Moderate
13.	Not known ..	S. typhimurium	1	—	?	Vomiting and diarrhoea..	Moderate
14.	?Jellied veal	S. typhimurium	1	1	?	Nausea, diarrhoea, abdominal pain, anorexia, vomiting	1 moderate 1 mild
15.	Not known ..	S. typhimurium	1	2	?	1 patient—pyrexia, vomiting, convulsions and unconsciousness 1 patient .. .. 1 patient symptomless ..	Severe Very mild Mild
16.	?	S. typhimurium	—	2	?	Hoarseness, sore throat, diarrhoea, abdominal pain and vomiting	Severe
17.	Not known ..	S. typhimurium	—	2	?	Loose bowels..	Mild
18.	Not known ..	S. typhimurium	1	2	?	Pyrexia, abdominal pain, diarrhoea	Mild

ng.

were identified.

Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
6 negative	25 (8+ve)	—	Wholesale butcher and school central kitchen	School canteen, canteen centre and central kitchen	2,150	Overnight storage of cooked meat which was reheated.
—	—	Contacts 7 negative 7 (mice) negative 1 (mouse) +ve contacts	Wholesale bakery and local confectioner's shop	Home	? 8	The two cases occurred about the same time. Wholesale bakery was being treated for mice infestation.
—	25 negative	5 negative	Wholesale bakery and confectioner's shop near place of work	Place of work	? 1	
—	—	3 negative contacts	Gravy from tinned steak	Home	5	Father as "carrier" may have infected child patient during feeding.
—	—	6 negative	Not known	Not known	7	Child had been in hospital frequently with gastro-enteric conditions.
—	—	2 negative	Not known	Not known—either home or day nursery	?	—
—	—	2 negative	Not known	Not known	3	Patient 6 months old.
—	—	?	In adjoining county borough	Place of work	?	Food purchased and consumed in Borough of Stretford.
—	—	3 negative	?	Home	4	Several foods under suspicion.
—	—	2 negative	?	Home	3	—
—	—	3 negative	?	Home	5	Several foods under suspicion.
—	—	5 negative	?	?	6	Returned to hospital 2 weeks after discharge.
—	2 negative	3 negative	?	Home	4	—
—	—	1 negative	?	Home	8	Sister of patient ill about a week before.
—	—	1 negative	Local grocers	Place of work	3	—
—	—	1 negative	?	Home	3	Several foods under suspicion.
—	—	2 negative	?	Home	4	Raw and lightly boiled hen eggs eaten.
—	—	2 negative	?	Hospital or Home	?	Had been home from hospital 2 weeks
—	—	2 negative	Purchased locally	Home	5	Several foods under suspicion.

Outbreak caused by		Cases		Illness—clinical features		
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity
19. Not known ..	S. typhimurium	1	—	?	Anorexia, abdominal pain, diarrhoea	Moderate
20. Not known ..	S. typhimurium	1	—	?	Diarrhoea, abdominal pain, pyrexia	Moderate
21. Not known ..	S. typhimurium	1	—	About 1 day	Abdominal pain, diarrhoea and vomiting	Moderate
22. Not known ..	S. typhimurium	1	1	9–10 hrs.	Nausea, vomiting, diarrhoea, pyrexia, cramp	Moderate
23. Not known ..	S. typhimurium	1	2	?	Diarrhoea, vomiting and bronchitis 2 cases symptomless	1 case moderate
24. Not known ..	S. typhimurium	1	1	?	Pyrexia, vomiting, diarrhoea, abdominal pain 1 case symptomless	Moderate
25. Not known ..	S. typhimurium	1	—	?	In hospital	?
26. to 30. Not known ..	S. typhimurium	—	5	—	Occurred in hospitals	—

Cases where causal

Outbreak caused by	Cases		Illness—Clinical features		
	Notified	Ascertained	Average incubation	Main symptoms	Severity
31. Not known	2	—	?	Abdominal pain, diarrhoea, vomiting 1 case symptomless	Mild
32. Not known	—	1	9 hrs.	Abdominal pain, diarrhoea and vomiting	Mild
33. Not known	1	—	?	Vomiting and diarrheoa ..	Mild
34. Not known	1	—	?	Diarrhoea	Very mild
35. Not known	—	5	2 hrs.	Vomiting and diarrhoea ..	Mild
36. Not known	1	—	?	Shivering, catarrh, abdominal pain, nausea, vomiting and diarrhoea	Moderate
37. Not known	1	—	4–5 hrs.	Abdominal pain, diarrhoea..	Mild
38. Not known	1	—	?	Abdominal pain, diarrhoea and vomiting	Mild
39. Not known	—	3	1 hr.	Vomiting and diarrhoea ..	Mild
40. Not known	—	2	?	Vomiting, abdominal pain, pyrexia, diarrhoea	1 moderate 1 mild

Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	1 negative	?	Home	2	Several foods under suspicion.
—	—	2 negative	?	Home	3	Child 3 months old.
	—	3 negative	?	Meals at Chester and on the Wirral peninsular on day trip	120	Several foods under suspicion.
—	—	1 negative	Local butcher	Home	3	Gravy prepared from beef, reheated and used 2 days later.
—	—	3 negative		Home	6	Cross infection from symptomless member of family.
—	—	4 negative		Blackpool when on day trip	?	Several foods under suspicion. Has continued to excrete organisms regularly for many months.
—	—	4 negative	?	?	5	In hospital with otitis media.
—	—	—	—	? Hospitals	?	Occurred in hospital and resident outside Manchester.

found.

sults of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	—	Locally purchased	Home	2	Several foods under suspicion.
—	—	—	Not known	St. Asaph or Rhyl	?	Meals consumed during motor-coach trip.
—	—	—	Purchased locally	Home	2	Pork and mince pie consumed.
—	—	—	Purchased locally	Home	1	Possibly tinned crab.
negative	—	—	Wholesale butcher, School central kitchen	School canteen	2,065	Possibly roast pork.
negative	—	3 negative	—	—	4	"Cashew" nuts suspected.
—	—	3 negative	?	City restaurant	?	Oysters or chicken suspected.
—	—	5 negative	?	Home	5	Dessicated coconut or walnut kernels suspected.
negative	—	—	Spain	Home	4	Tinned tomatoes suspected.
—	—	3 negative	?	?	6	No suspicious food.

MENTAL HEALTH SERVICE.

This part of the report gives particulars of the operation of the Coun schemes during 1953 under the Mental Deficiency Acts, 1913–38, and Lunacy and Mental Treatment Acts, 1890–1930 as amended by the Natio Health Service Acts, 1946–52.

Administration.

Mental Health Sub-committee.

The Service is operated by the Council through the Health Committee a a Mental Health Sub-committee has been established consisting of 14 membe including a co-opted representative of the Manchester District Nursing In tution. The Sub-committee meets each month and deals with all matt within the purview of the local health authority relating to mental health, w the exception of staff appointments, salaries, wages and conditions of servi The Sub-committee has no delegated powers and all its proceedings are subj to confirmation by the Health Committee and the City Council.

Staff.

Three duly authorised officers are employed to initiate proceedings for t care and treatment of the mentally disordered. The field work on the men deficiency side is carried out by five mental health visitors, all experienc social workers, and the care and after-care of mental illness is in the hands two qualified psychiatric social workers. The Departmental medical staff approved for the purpose of giving medical certificates under the Men Deficiency Acts.

The Department regretted the loss of two of the staff during the ye The Administrative Assistant for the Service resigned in December, 1953, order to take up an appointment outside Manchester, and one of the psychiat social workers was obliged to relinquish her appointment in August, 1953, f domestic reasons.

The number of staff employed in the occupation centres is given in t following table and is in accordance with the recommendations of the Minist of Health contained in Circular 91/49.

Occupation centre staff.

Occupation centre	Supervisor	Assistant supervisor	Caretaker	Cleaner	Coo
Ancoats	1	2	—	1	—
Victoria Park	1	6	1*	2	2
Wythenshawe	1	2	—	1	—
Total	3	10	1	4	2

* Resigned 9th April, 1953, and appointment brought to an end.

Co-ordination with hospitals.

The shortage of hospital accommodation, which is of course not only a but also a national problem, continued throughout the year to beset the ent administration of the Service. This shortage was particularly serious he mental deficiency side of the work and, at the end of the year, the names o less than 96 mental defectives were on the Regional Hospital Board's ng list for admission to permanent residential accommodation. These lassified according to sex, age and type in the following table which also an indication of the period of time that these patients have been waiting vacancies.

Type, age and sex distribution of mental defectives awaiting hospital admission.

ON WAITING LIST	MALE								FEMALE								TOTAL
	Under 16				Over 16				Under 16				Over 16				
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	
ears	—	2	—	—	—	—	—	—	1	—	—	—	—	1	—	—	4
.. ..	1	2	1	—	—	1	—	—	1	1	—	—	—	1	—	—	8
.. ..	2	5	1	1	—	—	2	—	3	3	—	—	—	1	1	2	21
.. ..	3	6	1	—	—	3	1	2	1	—	—	—	1	1	—	1	20
year	4	3	—	—	—	8	2	—	3	2	—	1	—	16	4	—	43
waiting list, 1st December, 1953 ..	10	18	3	1	—	12	5	2	9	6	—	1	1	20	5	3	96

(a) cot and chair cases.
(b) ambulant low grade cases.
(c) medium grade cases.
(d) high grade cases.

ention must again be made of the very great help that some of the mental ency hospitals have given in providing temporary vacancies to alleviate stic crises.

dmissions to mental deficiency hospitals numbered 90 during 1953. age and sex distribution, along with the authority on which they were ted, is shown in the following table. The number of persons admitted ental hospitals appears under the section of this report dealing with the y and Mental Treatment Acts.

Mental defectives admitted to mental deficiency hospitals in 1953.

Method of Admission	Male		Female		Total
	Under 16	Over 16	Under 16	Over 16	
tition	3	9	4	9	25
y parent	8	2	9	2	21
t Order	1	3	—	1	5
r of the Secretary of State ..	—	—	1	1	2
safety	1	—	2	—	3
ry admission	14	3	11	6	34
Total	27	17	27	19	90

Close co-operation continued to exist between the Service and a mental and mental deficiency hospitals in the region, and during 19 following domiciliary reports were supplied to the hospitals upon requ

Social history, progress, licence and recertification reports.

Type of report	Male		Female	
	Under 16	Over 16	Under 16	Over 16
Social history	—	5	—	20
Progress	2	125	—	42
Licence	11	134	2	67
Recertification	16	136	21	92
Total	29	400	23	221

Voluntary associations.

No duties were delegated to voluntary associations. With the app of the Minister, the Council continued their annual contribution of £ support of the general work of the National Association for Mental H A party of 26 pupils from the occupation centres had a week's holiday Association's Home at Rhyl and, in September, 1953, the Association s a further 12 month's course based on Manchester for the training of occu centre staff.

Negotiations continued throughout the year with the Mental After Association for the establishment of a mental health convalescent ho the North-West.

Training of staff.

In March, 1953, the Council seconded the Administrative Assistant f Service to a mental health course organised by the National Associatio Mental Health in conjunction with the University of London.

Two of the staff attended the Association's Manchester course fo training of occupation centre staff.

Two occupation centre assistant supervisors attended a refresher c run by the Association in Birmingham.

The Mental Deficiency Acts, 1913/38.

Ascertainment.

A total of 195 new cases of mental deficiency were ascertained in the during the year; of these, 166 were subject to be dealt with unde Mental Deficiency Acts. The ascertainment and disposal of these cas shown in the following tables:-

Ascertainment of mental deficiency—

(a) new cases ascertained in 1953.

	Education Act, 1944		Other sources		Total
	Section 57 (3)	Section 57 (5)	Subject to be dealt with	Not subject to be dealt with	
.. .. ..	31	33	18	19	101
s	28	31	25	10	94
Total ..	59	64	43	29	195

(b) disposal of mental defectives ascertained in 1953.

Method of disposal	Male		Female		Total
	Under 16	Over 16	Under 16	Over 16	
ctives found to be "subject to e dealt with"—					
nitted to institution	3	1	2	6	12
ced under guardianship	1	1	1	—	3
en to places of safety	1	1	1	—	3
ced under statutory supervision	33	39	39	34	145
d or removed from area ..	1	1	—	1	3
ion not taken by end of year..	—	—	—	—	—
ification cancelled	—	—	—	—	—
ctives not at present "subject be dealt with"—					
ed under voluntary supervision	2	13	1	8	24
r found not to be defective ..	—	—	—	—	—
l or removed from area	—	1	—	1	2
on unnecessary	2	1	—	—	3
on not taken by end of year..	—	—	—	—	—
Total	43	58	44	50	195

Forms of care.

2,425 mental defectives were known to the Service on the 31st Dece 1953. Of these 1,005 (41 per cent.) were under statutory supervision (9 per cent.) were under voluntary supervision, 1,186 (49 per cent.) we institutions, 11 under guardianship and 4 in a place of safety.

Guardianship.

In October, 1953, the Council resolved to try to increase the use of gua ship as a form of care for those mental defectives who require greater prote and control than can be afforded by supervision but who are not basica need of admission to mental deficiency hospitals.

By the end of the year 5 cases had been found guardians under thes arrangements.

Removal from supervision.

Removals from voluntary supervision numbered 24 and 85 others taken off statutory supervision during 1953. Details of these removals follows:—

Removal of defectives from supervision.

Reason for removal	Male		Female	
	From statutory supervision	From voluntary supervision	From statutory supervision	From voluntary supervision
Capable of managing themselves and their affairs	3	5	—	2
Transferred to voluntary/statutory supervision	—	2	2	2
Transferred to other authorities	8	1	6	2
Lost sight of	1	3	—	3
Died	5	—	2	—
Other causes	29	2	29	2
Total	46	13	39	11

Marriage and children.

Of the total number of mental defectives known to the Service, — and 4 females married during 1953. 3 defectives gave birth to children marriage and there were 4 illegitimate births to mental defectives durin year.

Occupation centres.

Attendance.

The total number of pupils attending the occupation centres at the e 1953 was 217. This was an increase of 47 during the year, attributable to improved ascertainment and partly to the special scheme of tran introduced early in 1953. Vacancies were provided for 6 pupils from the of the Cheshire County Council and for 4 pupils from the Lancashire Co Council. The following table gives details of the age and sex groups o pupils attending the three centres at the end of the year.

Attendance of mental defectives at occupation centres.

Occupation centre	Male		Female		Total
	Under 16	Over 16	Under 16	Over 16	
s	17	4	12	4	37
a Park	54	19	44	9	126
nshawe	23	12	17	2	54
r awaiting vacancies	—	—	—	—	—
Total	94	35	73	15	217

opment.

November, 1953, the Council approved building plans for the erection further centre and these were forwarded to the Minister of Health for oval as a capital building proposal. This centre will be located in Blackley vill serve the northern parts of the City.

al.

tisfactory reports on the centres were received from the Ministry of h following visits by an Inspector of the Board of Control.

party of 26 pupils from deserving families had a week's holiday at Rhyl gust, 1953. Parties and visits to the circus again formed features of the l Christmas festivities.

Lunacy and Mental Treatment Acts.

cations and admissions.

otifications of alleged insanity amounted to 873 during the year and of 634 were admitted to mental hospitals.

Lunacy and Mental Treatment Acts, 1890/1930.
(a) ascertainment.

Source of notification	Male	Female	Total
medical practitioners	220	340	560
ls and clinics	87	74	161
Corporation departments	13	15	28
uthorities	23	24	47
public	23	30	53
ources*	6	18	24
Total	372	501	873

* includes patients dealt with on behalf of other authorities.

(b) disposal.

	Male	Female	T
Hospital admission			
(*a*) voluntary	180	167	3
(*b*) temporary	—	3	
(*c*) certifiable	132	152	2
Referred to other departments or agencies	32	47	
No further action necessary	71	89	1
Total	415	458	8

Care and after-care.

In the early part of the year the Council resolved to try to recru services of a consultant psychiatrist for a period of two sessions a week. was subsequently approved by the Ministry of Health. Consultations place with the University and also with the Regional Hospital Board but not possible to make an appointment before the end of the period under re

Owing to town-planning difficulties, the Mental After-Care Assoc were unable to make much headway with their proposed convalescent in the North-west, but in 4 cases the Council approved periods of recupe in homes belonging to the Association in other parts of the country.

The statistics relating to care and after-care are shown in the follo table:—

Care and after-care of mental illness.

	Male	Female	T
Number of visits or interviews	526	851	1,3
Removed from care	95	112	2
Referred for medical report:—			
(*a*) to general medical practitioner	1	4	
(*b*) to psychiatrist or clinic..	1	3	
Interviews with other agencies, departments, or employers	75	71	1
Total..	698	1,041	1,

HEALTH EDUCATION.

ıblic interest in matters of health education was maintained through the ving media:—

1. field workers—health visitors and sanitary inspectors,
2. publicity by means of lectures, publications, exhibitions, and
3. co-operation with organizations interested in matters of health education of benefit to the general public.

eld workers, during the course of their duties, are able to advise members public. The sanitary inspector, who is investigating any sanitary nuisance, en able to offer advice on other matters concerning the state of property. ealth visitor, on after-care work, can help householders with questions of health. It is also the practice of field workers, when investigating cases ectious disease, to distribute publications giving advice on care of the nd the cleansing of the house.

o public exhibitions were held in Manchester at which Departmental could be displayed. The distribution of pamphlets and publications een continued, the main avenues being through public libraries, child e centres and school health clinics; 2,000 copies of the magazine "Better " were distributed in this way each month. The campaign for immuni- against diphtheria was continued by the display of posters and the on of advertisements in the programmes and handbooks published in ction with the Wythenshawe and Levenshulme Civic Weeks, the Roman ic and Church of England Whit-Week processions and the Manchester ration Transport Department's booklet " See Manchester by bus".

idents interested in the health services administered by the City Council ttended the Department, and lectures have been given by medical prac- rs and officers of the Department to various organizations.

summary of the educational work in connection with the child welfare and in the Health Department is given below:—

Social and business organizations. Lectures were given by members of the health visiting and the sanitary services staff as follows: 11 to the Old People's Club; 8 to the Women's Co-operative Guild; 4 each to the Women's Guild and licensed houses' staff; 2 each to the Teachers' and Parents' Fellowship, the Young Mothers' Club, Railway Executive staffs and the Girl Guides; and 1 each to the Women's Assembly, the Wesley Guild, the Church Mothers' Fellowship, the Girls' Friendly Society, the Church Guild, the Community Association Mothers' Club, the International Group Y.W.C.A., the Senior Business Women's Group Y.W.C.A., the Over 60 Club, the Chorlton Poultry Club and the staff of a health department.

H.M. Prison. Two courses of lectures on mothercraft were given to women with young children in H.M. Prison.

Student nurses. Lectures and practical experience were arranged for student nurses from local hospitals; 121 attended a lecture given by the Superintendent Health Visitor and spent a session on a district with a health visitor; 43 observed the work of an infant clinic at a child welfare centre for a session and followed this by a discussion with the staff; 3 lectures on the social aspects of disease were given to student groups by child welfare centre superintendents.

Hospital tutors. 14 hospital tutors observed the practical work of the Department by spending a session on a district with a health visitor and one at a child welfare centre infant clinic.

Queen's nurse students. 3 lectures were given to these students, 1 by the Welfare Officer for the unmarried mother and her child, and 2 by the Superintendent Health Visitor.

(*f*) Student teachers. 3 groups visited child welfare centres to observe the work of clinics as follows: 18 students from the Manchester Teachers' Training College (w 2 students from other teachers' training colleges; and 2 students from the Col Housecraft.

(*g*) Health visitor tutors' course. A student from the Royal College of Nursing L worked in the Department for 2 weeks with the tutors to the student health visit practical and teaching experience, and with other senior members of the st additional experience.

(*h*) Health visitors. 2 lectures on environmental hygiene were given to health visito sanitary inspector.

(*i*) Nursery students. 35 senior students from the Nursery Training Centre attended clinics at child welfare centres for visits of observation and an explanation of the

(*j*) Princess Christian College students. A group of students observed the work infant clinic at a child welfare centre.

(*k*) Students in social administration (Manchester University). The Superintendent Visitor discussed the work of the health visitor with 2 groups of 3 students, wh spent a half-day a week for 6 weeks obtaining practical experience at an infan at a child welfare centre. They also worked for 1 session on a district with a visitor. 1 student worked with the Welfare Officer for the unmarried mother a child on 1 day a week for 6 weeks to gain experience.

(*l*) High school students. A lecture on environmental hygiene was given to the stud a girls' high school.

(*m*) Medical students. 8 students from the Department of Child Health, St. Mary's Ho attended a day nursery and an infant clinic at a child welfare centre each mo students paid a total of 8 visits to ante-natal clinics at child welfare centres for exp on that work.

(*n*) Doctors. Medical practitioners studying for the Diploma in Public Health exam have attended various sections of the Department to obtain specialized experienc members of the staff. 5 doctors studying for the Diploma in Child Health exam attended a total of 30 sessions at infant clinics at child welfare centres.

(*o*) Visitors from overseas. A health visitor from New Zealand and one from Canad a day in the Department with various members of the staff for experience of th in this country. Two Russian pediatricians were shown the work of the Departm relation to children.

AMBULANCE AND TRANSPORT SERVICE.

1. Ambulance Service.

Introduction.

The Manchester Ambulance Service has continued to operate in accor with the provisions of Section 27 of the National Health Service Act, as amended by Section 24 of the National Health Service (Amend Act, 1949.

At the end of December, 1953, the ambulance fleet consisted of the follo vehicles:—

53 ambulances,
5 sitting case vehicles with a seating capacity of more than four
4 sitting case vehicles with a seating capacity of four or less

four of which were new vehicles obtained in 1953, as replacements for pr vehicles. The average age of the fleet is now six years.

These vehicles are distributed between the main Headquarters of the Se at 81, Belle Vue Street, West Gorton, and five sub-depots. Vehicles Headquarters also operate each day from two of the larger hospitals in the under the direct control of an Ambulance Service Sub-depot Supervisor. sub-depots are sited so as to give the maximum service in the shortest po time, particularly with regard to accidents and emergency calls.

s a general rule, all requests for ambulance transport are received in the rol Room situated at the Headquarters Depot. These requests are dealt either by vehicles from the Headquarters Depot or are telephoned by direct to the sub-depots according to the availability of vehicles and also to the of the City from which the ambulances have to collect the patients. At of the larger hospitals, direct contact between the Hospital Transport and the Ambulance Service Sub-depot Supervisor is maintained, at two an Ambulance Sub-depot is situated within the grounds of each of the tals and at one where the Ambulance Service Sub-depot Supervisor s out his duties in the Hospital Transport Office. Close liaison is thus ained and duplication and overlapping of orders is eliminated.

tional.

he demand for ambulance transport continued to increase, particularly in ction with the transport of out-patients, the removal of which accounted proximately 68 per cent. of all patients conveyed. 107,677 out-patients dealt with during the year compared with 103,585 in 1952. The increased nd resulted in an increase of 3.5 per cent. in the total milage of the ance fleet although there was a 10 per cent. increase in the total number of ts carried. This increased demand was met without any addition to the e strength but the appointment of three additional ambulance drivers hree additional ambulance attendants for the purpose of holiday and ss relief helped materially in dealing with the extra work.

Operational record.

	1952	1953
Number of calls	90,118	97,721
Patients removed	143,054	158,364
Total mileage	817,865	846,023
Mileage outside Manchester	18,426	24,532

Analysis of removals.

	1952	1953
Accidents	8,091	8,840
Infectious	10,309	10,178
General	124,654	139,346
	143,054	158,364

us removals.

66 cases of infectious disease other than tuberculosis were conveyed to om hospitals, 1,539 of which were removed to Monsall Hospital. tients suffering from various forms of tuberculosis were removed to ia and 7,456 tubercular out-patients were conveyed to and from clinics natoria, for treatment.

Hospital Car Service.

The Hospital Car Service, which is operated by the local branch of Women's Voluntary Services on behalf of the Manchester Ambulance Se has continued to augment the Ambulance Service and is mainly concerned the transport of walking cases to and from hospitals within the City fo patients treatment and in-patients on discharge from hospitals within th to their homes. The operational record of the 16 drivers normally utilize as follows :—

	1952	1953
Journeys	9,359	8,244
Patients	19,615	18,083
Mileage	145,917	142,842

Staff.

The number of operational staff authorised was increased by one Sub- Supervisor, three ambulance drivers and three ambulance attendants duri year and, at the 31st December, 1953, comprised the following:—

Sub-depot supervisors	6
Ambulance drivers	65
Ambulance attendants	68
	139

Of this number, 128 or 92 per cent. had qualified or requalified in fir within the last three years. The remaining 11 were all attending first aid cc at the end of the year, being either new entrants into the Service or pers who had last requalified in 1950.

The ambulance drivers together with the drivers of the pool cars commercial vehicles were again entered in the National Safe Dr Competition. The rules of this Competition require that, in order to q for an award, the driver must have been free from any accident, however s to person or property for which he was in any way blameworthy and thi has been enforced rigidly in order both to maintain the value of the award also to maintain the high standard of driving which is expected from mer of the Ambulance Service.

76 drivers were entered for the 1953 Competition, of whom 66 ultim qualified for an award, as follows:—

Bar to 20 years' brooch	4
Bar to 15 years' brooch	2
15 years' brooch	1
Bar to 10 years' medal	5
10 years' medal	1
Bar to 5 years' medal	9
5 years' medal	7
Diploma	37
	66

Defence.

pproximately 100 members of the Ambulance Section of the Manchester Defence Corps were engaged in sectional training, after having completed basic general training and a full first-aid course as prescribed by the e Office.

regular rota of attendance at the main Ambulance Depot at Belle Vue has been maintained in order to give the volunteers an opportunity of ıpanying ambulance crews on their normal duties, to observe the methods ndling and disposing of patients. Training centres have been opened at llowing addresses, in addition to that at the Belle Vue Street Ambulance :—

Chorlton Ambulance Depot, off Barlow Moor Road, Chorlton-cum-Hardy.
Civil Defence Training School, Livesey Street, Collyhurst.
Railway clerks' dining hall, Cornwall Street, Openshaw.

ctures have been given on the following subjects:—

The war-time organization of the Ambulance Service.
First-aid revision.
Blanketing of stretchers and loading of ambulances.
Map reading.
Mechanism of a motor ambulance.
U.X.B. and damage control.

e first full course of driving instruction was organized during the summer s, to which 20 volunteers were invited. 15 trainees completed the course, sed the official driving test, one failed and two were unable to take the ıe to sickness. A regular programme of ambulance driving practice has rranged for volunteers who could either drive on enrolment or who have rained since joining.

nicipal Car Pool.

e Municipal Car Pool, which consisted of 12 saloon cars, has continued to ıinistered and operated by the Ambulance and Transport Service. These e used by the various committees and officials of the Corporation and the e operated was 91,148 miles compared with a mileage of 124,588 miles 2. Due to a reduction in demand for the use of these cars, however, a mme designed to reduce the number of cars operated was initiated the year and, at 31st December, 1953, 11 cars were being operated.

nmercial vehicles.

roughout the year two vans and one lorry were operated on Health ittee functions, The mileage run was 13,252 compared with 35,034 n 1952, when more vehicles were being operated.

ıunization unit.

mobile immunization unit has continued to operate and has provided s for the immunization of children against diphtheria to the parents of n (under five years of age) who could not attend at child welfare centres nurseries. In addition, special visits were made to those areas where the age of immunized pre-school age children was low. This vehicle, which nverted single-deck omnibus, operates from the Monsall Sub-depot mileage during 1953 was 7,736.

5. Disinfection service.

A disinfecting station forms part of the Monsall Sub-depot and two disinfectors are used for the disinfection of clothing and bedding. In add a formalin chamber is used for articles which cannot be subjected to the process. One of the commercial vehicles is utilized as a bedding van fo collection of infected bedding, clothing, etc., and has been designed so ensure that complete disinfection of the interior can be carried out b being put into service for the return of disinfected articles. The disinfecti 16,334 articles was carried out, this total consisting of the following:—

Blankets	2,442
Sheets	274
Pillows	1,206
Bolsters	46
Quilts	37
Mattresses	1,724
Beds	72
Articles of clothing	5,505
Library books	616
Miscellaneous	4,412
	16,334

The collection and return of these articles necessitated a mileage of being undertaken by the bedding van.

6. Clinic.

A clinic for the treatment of persons suffering from scabies and verm conditions is situated at the Monsall Sub-depot, and the following show numbers of treatments given during the year:—

Scabies	492
Verminous conditions	521
School children	159

7. Operating mileage.

The total mileage operated by the various sections of the Ambulanc Transport Service was as follows:—

Ambulance Service	846,023
Municipal Car Pool	91,148
Commercial vehicles	13,252
Bedding van	12,841
Immunization Unit	7,746
	971,010

Compared with the 1952 total of 1,000,633 miles, this total shows a red which is due, mainly, to the reduction in the numbers of pool cars and mercial vehicles operated.

LANGHO COLONY FOR EPILEPTICS.

Dr. G. A. Thompson, Medical Superintendent.

TAFF:

G. A. Thompson, M.R.C.S.(ENG.), L.R.C.P.(LONDON)	Medical Superintendent.
Miss E. J. Smith, S.R.N., R.M.N., R.M.P.A.	Matron.
S. A. C. Bunn, F.C.C.S., A.H.A.	Secretary-Steward.

n the 31st December, 1953, there were maintained in the Colony 286 and 292 female residents; of these 218 were chargeable to the Manchester oration and 360 to other authorities, as under:—

County Boroughs.

rrow-in-Furness	1
rkenhead	2
rmingham	9
ackburn	21
ackpool	12
lton	7
otle	2
adford	2
rnley	13
oydon	2
wsbury	2
inburgh	1
lifax	1
wich	2
eds	7
ncoln	3
erpool	24
wcastle-on-Tyne	3
ttingham	1
dham	7
ston	6
chdale	1
ford	27
uthport	2
ckport	2
rrington	2
gan	2
	164

County Councils.

Cheshire	11
Durham	1
Glamorgan	3
Lancashire	143
Leicestershire	1
Middlesex	7
Monmouthshire	1
East Suffolk	7
Surrey	7
Worcestershire	1
Yorkshire, North Riding ..	2
Yorkshire, West Riding ..	10
	194

Ministries.

Ministry of Pensions and National Insurance (Blackpool)	1
Ministry of Pensions and National Insurance (Manchester)	1
	2

Total: 360

e total number of epileptic seizures during the year was 25,573.

	Severe	Slight	Total	Average	Numbers maintained
Male	8,324	7,088	15,412	58	286
Female ..	4,409	5,752	10,161	35	292
Totals ..	12,733	12,840	25,573	—	578

The classification of the incidence of seizures during the year is as follo

	Male	Femal
Status epilepticus	1	—
Increased incidence	72	6
Decreased incidence	84	37
No change	83	180
No seizures during the year	52	69

There were:—

	Male	Female	To
Admissions	31	27	5
Re-admissions	29	4	3
Discharges	43	26	6
Deaths	8	6	1

Treatment at other hospitals and clinics for:—

	Male	Femal
Blackburn Royal Infirmary:—		
Fractures Department	32	57
Ear, Nose and Throat Department	14	4
Skin Department	8	8
Medical Department	3	3
Surgical Department	16	10
Radiotherapy Department	2	7
Orthopaedic Department	8	4
Physiotherapy Department	2	1
Gynaecology Department	—	2
X-Rays Department	5	7
Surgical appliances and garments	2	10
Hearing-aid Department	2	—
Wythenshawe Hospital:—		
Plastic Unit	1	1
Ministry of Pensions (Quay Street, Manchester):—		
Artificial limbs	1	1
Chest Clinic, Blackburn	2	3
Transfers, for operative treatment, to:—		
Royal Infirmary, Blackburn	9	5
Queens Park Hospital, Blackburn	2	2
Transfers, for observation, to:—		
Powick Mental Hospital, Worcester	1	—
Queens Park Hospital (Mental Ward)	—	2
Whittingham County Mental Hospital	—	1

ne employment of residents on 31st December, 1953, was as follows:—

	Male	Female
omestic—the homes, etc.	90	54
omestic—Administrative block	10	14
omestic—general kitchen	—	8
aundry	2	22
ewing room	—	25
ccupational therapy hut	17	—
rounds, coal-yard and wood shed	50	—
ngineers' department	2	—
orks department	1	—
oemakers' department	2	—
ilors' department	1	—
ght duties in the homes	20	50
ffice and general stores	5	—
ssembly hall duties	4	—
rms	13	—
tchen gardens	8	—
orts field duties	6	—
derly, infirm or otherwise unemployable	55	119
Totals	286	292

l remarks.

roughout the year the health of the residents has continued to be very tory. In January the Colony was visited by the Mobile Mass Radiography f the Manchester Regional Hospital Board ; all the Colonists and the y of the staff were X-rayed—the consequent report from the Unit being ely good. During the year various new anti-convulsant drugs for the nt of epilepsy were introduced and trials conducted as to their relative . The best of these drugs have now been incorporated into the standard s of treatment.

of interest to note that all through the year the Colony has been full to , and there is still a long waiting list for admission, especially on the de—applications having been received from all over the country.

residents have been occupied as much as possible, although it will be hat a considerable proportion of the residents, while up and about, are ed from being employed by age and infirmity.

nments.

usual entertainments were enjoyed by the residents during the year; ion Week proving itself quite a high-light in our life here. During that ere was a very full programme of dances, extra cinema shows, concerts pen-air Historical Pageant, depicting the Queens of the past who have in their own right and also paying homage to our new Sovereign Lady, Elizabeth II, which was given by the Colony Rangers, staff and residents.

ne all the residents went on their day's outing to the seaside and at as they all visited a local pantomime in Blackburn.

rtunately, it rained on our Annual Sports Day; this had to be post- nd was held at a later date.

Cricket and football matches take up a considerable part of the resid spare time, and I am pleased to report that the Colony cricket team, cons of staff and residents, had a most successful season in the North-East Lanca League " B " Division, finishing up by winning the championship.

I would also like to add that the Blackburn Rovers' third team have k played several matches on our ground; these have been greatly appreciat all the residents.

Official visits

We have been visited by Committee members and officials from Welfare Departments of Blackburn C.B., Dewsbury C.B., Middlesex and Warrington C.B., who expressed themselves well satisfied with the cond and treatments of their residents. We also received a visit from a S Medical Officer and a Chief Welfare Officer of the Ministry of Health.

On the 1st July, we were pleased to entertain a number of students who taking the National Association for Mental Health course.

Improvements and work completed.

A steady improvement has been maintained in the furnishing of the h and the new ducts carrying all the main services to the female side have been completed.

Part of one of the huts of the Emergency Hospital has been converted a bungalow and is now occupied by one of the farm hands, and the progra of re-wiring and providing all the homes with hot-plates and geysers has steady progress.

We now have television sets in three of the homes and these are g appreciated by the residents.

Farms.

Mr. H. Harford retired from the service after completing 31 years a Farm Bailiff. He has left with all our good wishes and with the knowledg over that period he has done an excellent job of work.

Mr. H. Holt was appointed his successor and took over his duties o 1st April, 1953. He is already proving his worth as a practical farmer would like to wish him every success in the future.

I would like to conclude by again thanking the Matron, the Secr Steward, the Head Male Attendant and all other members of the staff fo support which they have given me during the past 12 months.

DR. GARRETT MEMORIAL HOME.

The Home, which contains 130 effective beds, affords recuperative, seaside alescence for Manchester children between the ages of two and 15 years.

The sources from which children are referred to the Home are, the School ical Service, Maternity and Child Welfare centres, City hospitals and ral medical practitioners. The majority of those admitted suffer from ral and/or nervous debility, some form of disease of the respiratory m, or anaemia.

Children are conveyed between Manchester and the Home, in Conway, h Wales, by chartered omnibus once each week. Admissions numbered compared with 759 in 1952. Of the 865 children discharged, 736 were ded as " fit", 113 as " improved", and 16 as " requiring further hospital ment "; 849 gained weight during their stay, whilst in the case of the ining 16, no changes in weight were perceived.

he highest number in residence was 138 and the lowest 80; the average per maintained was 116.1; it is estimated that another 2.9 could be added e latter figure in respect of children taken home by their parents prior to lischarge date; 265 children were " discharged " in such circumstances.

here were 2 instances of children leaving the Home without permission mpared with 5 last year. In the first instance, a boy of 15 years influenced nger boys to accompany him on a tour of the surrounding district; they ually returned to the Home at 7-0 p.m. after staff had been searching em for over five hours. In the second instance, a boy, clad only in his as and slippers, departed whilst his mother was visiting him; he was quite near to the Home by a member of the staff.

ness among children, requiring nursing care in the Home, included ases of tonsillitis, infected throats or feverish colds, 33 cases of chicken 1 children developed scarletina and were transferred to the local isolation al. 4 children were transferred to the local general hospital; 2 had slight res, 1 for tonsil and adenoid operation and 1 for " observation".

l the sick children recovered satisfactorily.

e recruitment of qualified nursing staff has again been very poor. Miss Nuttall, Assistant Matron, left on the 17th April, 1953, to be married. ccupied the positions of Staff Nurse, Sister, and Assistant Matron during years of service and was a great asset to the Home. Miss D. Owen, was promoted to Assistant Matron on the 1st April, 1953.

e staff of three wardens continue to provide and arrange entertainments e children by organising outdoor activities during the summer months; handicrafts and indoor games are arranged during inclement weather ng winter evenings; cinema shows have been a weekly feature much d by the children.

s is the first year of children being admitted weekly, hence the larger r of children admitted as compared with the previous year which was into 8 months of fortnightly admissions and 4 months of weekly ions.

major alterations or additions have been performed during the year. repairs to buildings, and the preservation of interior and exterior ion has been carried out satisfactorily.

MUNICIPAL HOSTELS

Walton House, Harrison Street, Ancoats.

Walton House is a registered common lodging house for men and accommodate 464 persons in separate cubicles. During 1953 the Hostel, a past years, provided excellent service to the men who use this class of acc modation and it was fully booked throughout the year; numerous requests accommodation had to be refused.

Increased operating costs caused advances in certain charges for the serv provided at the Hostel and the following charges applied as from 28th Ma 1953:—

Rent of cubicle	2s. 3d. a night or 14s. a week.
Bath	2d. (soap and towel provided).
Lockers, small	6d. for six months.
,, large	1s. for six months.
Parcels	1d. a week.
Early calling	1d. a night or 4d. a week.

An offer was received, and gratefully accepted, from a private firm in City to loan, free of charge, a television receiver on Coronation Day and proved to be a most successful form of entertainment ; so much so, that, the approval of the Health Committee, the residents' Social Sub-commi purchased from their own funds a projector-type television receiver wit 4ft. by 3ft. screen. This was placed in the smoke-room for the entertainm of all residents. The Social Sub-committee also purchased several sets dominoes and draughts for use by all residents. In addition, several conc were given by local voluntary organizations and all of these were well atten and greatly appreciated.

The catering section enjoyed the continued excellent patronage of the resid throughout the year and continued to provide supplies of groceries and m for purchase by the residents.

The laundry service for residents and certain Corporation departm was continued and work was completed as follows:—

Health Department—Ashton House municipal hostel for women.
Markets Department.
City Architect's Department.

Ashton House, Corporation Street.

This Hostel, which is a registered common lodging house for women, accommodation for 210 persons in separate cubicles. The number of user the Hostel was slightly less than in previous years, the daily average b 172, as compared with 179 in 1952. Enquiries have failed to reveal particular reason for this decrease as regular residents who normally leav take up domestic work during the summer months have returned to the H and the decrease, therefore, in the main, could be attributed only to ca lodgers.

Daily averages of residents in recent years were as follows:—

Year	1953	1952	1951	1950	1949	1948
Daily average	172	179	180	191	184	182

The electrical installation of the Hostel is being rewired, following inspections the Fire Prevention Officer of the Manchester City Fire Brigade who orted that the original wiring constituted a fire hazard. It is expected that work will be completed by March, 1954.

On Coronation Day, a television receiver was loaned to the Hostel by a ate firm in the City and this was very much appreciated by all the residents.

As in past years the catering section continued to be well patronized, most he business being conducted through the grocery shop although cooked ls were still supplied on demand.

ncreased operating costs caused advances in certain charges at the Hostel from 28th March, 1953, the following charges were applied for the various ces provided:—

Rent of cubicle	2s. a night or 12s. 3d. a week.
Bath	2d. (soap and towel provided).
Lockers, small	3d. for six months.
,, large	6d. for six months.
Parcels	1d. a week.

rsing Services Division

DOMICILIARY MIDWIFERY
INCIDENCE OF BLINDNESS
CARE OF MOTHERS AND YOUNG CHILDREN
DENTAL CARE
HEALTH VISITING
REGISTRATION OF NURSING HOMES
DAY NURSERIES
TUBERCULOSIS
EPILEPSY AND CEREBRAL PALSY
HOME NURSING
CONVALESCENCE
HOME HELP SERVICE
FAMILY WELFARE SERVICE
VENEREAL DISEASES

MATERNAL AND CHILD HEALTH SERVICES.

Dr. Alice I. Burke, Senior Medical Officer (Nursing Services).

AFF.

Medical—

Winifred A. Kane, M.R.C.S., L.R.C.P., D.P.H.(LOND.), Senior Medical Officer (resigned 15th March, 1953).

Alice I. Burke, M.B., CH.B., D.P..H, Senior Medical Officer (appointed 16th March, 1953).

Veronica May Bowman, M.B., CH.B., (appointed 2nd December, 1953) .. ..
Muriel Jane Brayshay, M.B., CH.B. .. ..
Maureen Corcoran, M.B., CH.B., B.A.O., L.M. (appointed 2nd February, 1953) .. ..
Annie Margaret Dawson, B.SC., M.B., CH.B., D.C.H., D.O. .. ..
Harold Diggles, M.B., CH.B. .. ..
Florence Maud Duckworth, M.B., CH.B. ..
Rosaline Howat, M.B., CH.B. .. .. ..
Gwendoline Mary Elsie Keevil, M.B., B.S., D.C.H. .. ..
William Lees, M.B., CH.B., M.R.C.S., L.R.C.P., D.OBST. R.C.O.G. (appointed 1st June, 1953).. .. ..
Helen Elizabeth Mair, M.B., CH.B. .. ..
Lydia McMurdo, L.R.C.S., L R C.P... .. ..
Barbara Joyce Nathan, M.B., CH.B., M.A., D.OBST. R.C.O.G. .. ..
Dorothy Elizabeth Margaret Thomas, M.B., CH.B., D.OBST. R.C.O.G. .. ..
Alice Ruth Eveline Widdows, M.B., CH.B., D.OBST. R.C.O.G. (appointed 2nd December, 1953) .. ..

} Medical Officers.

Nursing—

Eileen A. Lamb, S.R.N., S.C.M., M.T. DIPLOMA—Non-Medical Supervisor of Midwives.
Evelyn L. Gowing, S.R.N., S.C.M., H.V. CERT.—Superintendent of Health Visitors.

Clay—

Charles A. Hay, M.B.E., ... Chief Administrative Assistant.

DOMICILIARY MIDWIFERY SERVICE.

The staff establishment of domiciliary midwives comprises a non-medical ervisor and 2 assistants, 67 district midwives, 6 special maternity nurses, of whom are employed by the local authority. In addition there are 12 niciliary midwives employed in St. Mary's Hospital Extern Service and nidwives in the service of the Manchester District Nursing Institution. ese two bodies employ midwives on an agency basis on behalf of the City ıncil.

ervision of midwives (Midwives Acts).

Notices of intention to practise were received during 1953 from 273 wives and 5 maternity nurses. 107 notices were from municipal midwives midwives employed on an agency basis, 163 were from midwives employed ospitals and nursing homes and 3 independent midwives gave the necessary ces.

The number of notices of intention to practise received during 1953 compares a total of 259 given during 1952.

The non-medical supervisors made a total of 537 supervisory visits dur 1953, as follows:—

Inspections at midwives' homes	
Visits to confinements and nursings	
Visits to ante-natal and post-natal clinics	
Special visits to midwives	
Investigations, patients' homes, pyrexia, etc.	
Hospitals and nursing homes	
Coroner's and Magistrates' Courts	

Training of midwives.

The City Council participates jointly with St. Mary's Hospitals in a sch for training pupil midwives. 24 municipal midwives are approved by Central Midwives Board for Part II district training and 31 pupils were trai by them during 1953. All the pupils passed the examination of the Cen Midwives Board.

Eight municipal midwives attended post-graduate courses during 195 Birmingham, Bristol, Leeds and Oxford. A series of six lectures was give Manchester during the winter months under departmental arrangements there was an average attendance of 86 midwives.

Transport.

Motor cars are owned by 30 municipal midwives and they are reimbu for mileage at the authorized rates.

Midwives without cars are able to obtain transport either during the or night on application to the Health Committee's ambulance and trans depot.

Ante-natal care.

Midwives hold ante-natal clinics at 23 municipal welfare centres and made 2,815 attendances for this purpose.

The services of a medical officer are available, if required, at each se and the attendances by patients totalled 19,960.

In addition to ante-natal care, at 5 clinics there are arrangements for natal examinations. Midwives made 189 attendances at clinics in conne with post-natal care.

Deliveries.

The total number of attendances at births in the City by midwives d 1953 was 13,457, of which 5,171 were home confinements attended as s below. Attendances at births in hospitals numbered 7,290 and in n homes 996.

Attendances at domiciliary births.

Municipal midwives and midwives acting as maternity nurses		Queen's district midwives		St. Mary's district midwives	Independent midwives		Private maternity nurses
Midwives	Maternity nurses	Midwives	Maternity nurses		As midwife	As maternity nurse	
3,456	815	31	96	751	12	8	2

Of the total number of confinements in the City, the percentage of those nded at home during 1953 was less than in 1952, the respective percentages ng 39.6 in 1952 and 38.4 in 1953. This may be attributed partly to an reased number of maternity beds in hospitals which became available in latter part of 1953, largely as a result of representations by a Working ty which was set up to examine the demand for such beds and their lability.

There were 5,000 applications for the services of municipal midwives and hese 707 were cancelled for various reasons.

The average number of cases attended by domiciliary midwives employed ct or under agency arrangements by the City Council during 1953 was as ows:—

Municipal midwives	63.7
St. Mary's district midwives	62.5
Queen's district midwives	25.4

Apart from duties arising from ante-natal care and actual deliveries, other k continues to make large demands upon the services of municipal midwives.

Duties concerning the investigation of home conditions in connection applications for hospital confinement involved 1,969 visits and there were 1,719 visits to patients discharged from hospitals before the 10th day.

Patients discharged after the 10th day are visited by health visitors as soon possible.

ical aid.

There were 2,252 requests for medical aid in accordance with the rules of Central Midwives Board. Of these 181 were by midwives in maternity es having no resident medical officer and the remainder were by domi- y midwives. Where medical aid was requested at domiciliary confinements, 337 cases a doctor had been booked and in 734 cases a midwife only was ged.

cial feeding.

ecourse to artificial feeding was notified in 645 instances—134 from ives in domiciliary practice and 511 from institutions.

esia.

ne number of patients who avail themselves of facilities for analgesia nues to increase.

ll municipal midwives are trained in the administration of gas and air sia and each is supplied with the necessary apparatus.

uring 1953 the number of patients who had gas and air analgesia was compared with 2,967 in the previous year.

thidine was administered to 2,593 patients, of whom 2,166 were attended unicipal midwives, 394 by St. Mary's district midwives and 33 by Queen's t midwives. The total for 1952 was 2,090.

ral pyrexia.

e number of cases of puerperal pyrexia notified during 1953 was 505, e per 1,000 total births being 40.16. This is a reduction compared with evious year.

There were no deaths from puerperal pyrexia.

Of the 505 cases notified, 283 were puerperal sepsis, 215 puerperal p and 7 were abortions.

They may be further classified as 399 notifications relating to full term and 99 relating to premature labour.

The incidence of cases of pyrexia in the practise of midwives is shown following statement:—

Incidence of pyrexia.

	Municipal midwives	Midwives as maternity nurses	St. Mary's district midwives	Queen's district midwives	Institutions	Independent midwives	General practitione no nursin attendanc
A. (1) Infection of genital tract ..	9	21	38	—	215	—	—
(2) Abortions ..	—	—	—	—	3	—	4
B. Extra genital causes	6	10	22	—	140	—	—
C. Unclassified ..	2	4	6	—	25	—	—
Totals	17	35	66	—	383	—	4

232 abortions occurred which were transferred to hospital, but w notifiable under the Puerperal Pyrexia Regulations, 1951.

Maternal deaths.

There were 9 deaths during 1953 which were directly attributable t birth and one which was associated with childbirth. The maternal m rate was 0.80 compared with a rate of 0·71 in 1952.

Of the 10 patients who died, 3 were in normal full term labour, 4 in ab full term labour and 3 were in premature labour.

The 10 maternal deaths which occurred were due to the following ca

1. 1 (*a*) Shock, (*b*) haemorrhage, (c) Caesarean section.
2. 1 (*a*) Accidental haemorrhage, (*b*) pre-eclamptic toxaemia, (c) pregnancy.
3. 1 (*a*) Air embolism, (*b*) spontaneous rupture of vaginal vault, (c) forcep for maternal distress. 2. Pre-eclampsia.
4. Obstetric shock due to difficult labour.
5. 1 (*a*) Post-partum haemorrhage, (*b*) manual removal of retained placenta. partum haemorrhage.
6. 1 (*a*) Renal failure, (*b*) concealed accidental haemorrhage.
7. 1 (*a*) Massive air embolism, (*b*) ruptured uterus. 2. Pregnancy normal d
8. 1 (*a*) Caesarean section, (*b*) paralytic ileus. 2. Obstructed labour.
9. 1 (*a*) Cerebral haemorrhage, (*b*) toxaemia of pregnancy.
10. 1 (*a*) Anuria, (*b*) bilateral cortical necrosis in puerperium.

In addition there were three other maternal deaths in Manchester h the patients residing outside the City boundary, viz. 2 in Hale, Chesh 1 in Accrington.

ıt home and

Weight at birth	Born in nursing home and transferred to hospital on or before 28th day			Premature still-births		
	Total	Died within 24 hrs. of birth	Survived 28 days	Born in hospital	Born at home	Born in nursing home
(1)	(14)	(15)	(16)	(17)	(18)	(19)
b. 4oz. or less (1,500 gn or less)	1	1	—	67	18	—
ver 3lb. 4oz. up to a including 4lb. 6oz. (1,5C 2,000 gms.)	—	—	—	45	10	2
ver 4lb. 6oz. up to a including 4lb. 15oz. (2,C 2,250 gms.)	—	—	—	19	3	—
ver 4lb. 15oz. up to a including 5lb. 8oz. (2,2 2,500 gms.)	—	—	—	18	12	—
Totals	1	1	—	149	43	2

All maternal deaths occurred in hospital practice and with one exception, had been booked for hospital confinement. The exception had engaged a icipal midwife but was transferred to hospital before delivery, in view of -partum haemorrhage.

phigus neonatorum.

There was a decrease in the incidence of pemphigus compared with the ious year. Four cases were notified during 1953 and six during 1952. he cases occurred in hospitals and the infants were successfully nursed pecial maternity nurses on discharge.

tified cases of skin eruption.

he maternity nurses paid a total of 413 visits to 59 cases of skin infection. isits to 39 cases were made in 1952.

rths

here were 343 notified stillbirths which represents a percentage in relation tal births of 2.70. The respective percentages for 1952 and 1951 were nd 2.50.

notified stillbirths occurred in domiciliary practice and 271 in tions.

l nursing duties of maternity nurses.

maternity nurses are employed for the care of cases of pyrexia and unsatisfactory conditions of mother or infant which it is considered rable for midwives to attend. They also attend to any further care needed ternity cases discharged from hospital.

e following summary of visits gives particulars of their work.

Visits by maternity nurses.

Reason for visit	*No. of visits*
Notified cases of puerperal pyrexia (nursings)	639
Unsatisfactory conditions of mother	2,575
Abortion	288
Infection in the home	12
Unsatisfactory condition of infant	332
Unsatisfactory skin conditions	413
Premature infants	355
Ophthalmia neonatorum, etc.	196
Puerperal pyrexia and other special investigations	181
Total	4,991

Premature babies.

Three specially trained nurses are employed for the care of prem infants in their own homes.

They were responsible for the care of 426 infants during 1953. 290 p ture infants were referred by hospitals, 41 by nursing homes and the rema by domiciliary midwives.

When the nurses ceased to attend, 82 infants were wholly breast fe were on breast and complementary feed, and 296 were artificially fed.

Neo-natal mortality rate of premature infants according to birth weight.

Weight	Survived	Died	Total	Mortalit per
Under 3 lb.	10	1	11	1
3—4 lb.	58	—	58	—
4—5 lb.	197	—	197	—
5 lb. plus	159	1	160	0.
Total	424	2	426	

Provision of cots.

Specially prepared and heated cots for premature infants are availa use in the home on application by doctor or midwife and were in use occasions during the year.

Ophthalmia neonatorum and other eye conditions.

Three ophthalmic trained nurses are employed for the care of all ey referred to the Department.

The sources of reference of such cases is shown in the accompanyin

Cases of ophthalmia neonatorum and conjunctivitis in newly-born infants and eye c in older children.

	Legitimate	Illegitimate
1. Ophthalmia neonatorum—		
(*a*) Notified by medical practitioners	53	2
(*b*) Notified by the Royal Eye Hospital ..	—	—
2. Conjunctivitis in newly-born—		
Reported by midwives :		
(*a*) Own cases	283	5
(*b*) Discharged from hospital before 14th day	54	2
3. Conjunctivitis and other eye defects in children over 14 days—		
(*a*) Reported by medical officers of child welfare centres	88	4
(*b*) Reported by health visitors	316	13
Total number of cases	797	26

l cases attended the Royal Eye Hospital for treatment (10 as in-patients, out-patients) and 752 cases were attended by private doctors.

here were no cases of corneal infection.

ne of 16 swabs taken proved positive—G.C.

f the 823 cases referred to the Department, 755 were reported to have ered, 1 died, and 67 were still under treatment at the end of the year.

phthalmic nurses paid 823 primary and 5,293 subsequent visits during ear, a total of 6,116.

lysis of eye conditions of children over 14 days referred by health visitors and child welfare centres

	Brought forward from 1953	New cases	Carried forward to 1954
tivitis (simple)	3	269	85
tivitis (purulent)	1	18	1
l obstruction	5	85	3
ystitis	—	12	—
nebula	3	1	4
a	4	2	4
um	—	20	—
(congenital)	9	6	15
(traumatic)	2	—	—
.. ..	2	—	2
vision	16	6	18
halmos	4	1	3
us	4	—	4
lmos	3	—	1
.. ..	2	—	—
mos	1	—	1
pacity	1	—	—
al fibroplasia	19	—	18
phy	3	—	3
.. ..	1	—	1
lcer	1	—	1
etinitis	—	1	1
	84	421	85

case of retrolental fibroplasia died aged 10 months as a result of an

INCIDENCE OF BLINDNESS

(National Assistance Acts)

The information contained in Part A of the following statement, wh in the form requested by the Minister of Health, has been supplied b Chief Welfare Officer of the City Council's Welfare Services Departmen

A.—Follow-up of registered blind and partially sighted persons, 1953.

	Cause of disability		
(i) Number of cases registered during the year in respect of which paragraph 7 (C) of Forms B.D.8 recommends:—	Cataract	Glaucoma	Retrolental fibroplasia
(*a*) No treatment	60	15	—
(*b*) Treatment (medical, surgical or optical)	29	10	—
(ii) Number of cases at (i) (B) above which on follow-up action have received treatment..	11*	10	—

* A further 9 cases have attended the Eye Hospital and are now on the waiting list for operations.

B.—Ophthalmia neonatorum

(i) Total number of cases notified during the year ..	55
(ii) Number of cases in which:—	
(*a*) Vision lost	Nil
(*b*) Vision impaired	Nil
(*c*) Treatment continuing at end of year	Nil

Cases of retrolental fibroplasia among premature infants–

Number blinded by glaucoma who had not received treatme

CARE OF MOTHERS AND YOUNG CHILDREN.

Welfare centres.

he Health Committee provides 26 welfare centres for mothers and children rious parts of the City. In addition there is a voluntary centre at the Name School.

lany welfare centres are held in hired halls which are not entirely actory for the purpose. There are difficulties in securing alternative ises, but the question of accommodation is kept under continuous review.

ne Health Committee have been concerned at the lack of clinic facilities e Brooklands and Woodhouse Park districts of Wythenshawe, where derable housing development is in progress. Steps have been taken to le premises for the purpose, which will also afford accommodation for l clinics.

s.

eekly clinics are provided as follows :—

Infants	69
Toddlers	25
Ante-natal	37

dical officers attend all sessions except 9 infant clinics which are taken th visitors only and 3 ante-natal clinics where midwives are in attendance. ante-natal clinics both doctors and midwives attend. Two centres ford treatment for venereal diseases in mothers and young children. tal examinations are undertaken at ante-natal clinics.

erapy.

siotherapy was provided at 21 centres during 1953.

iculties continue to be experienced in recruiting qualified physio- sts to fill vacancies in the establishment and as a result the service given o extensive as is considered desirable.

ions include remedial exercises for children of 2 to 5 years who have l defects, minor deformities and either general or local poor muscular

e-natal and post-natal exercises are provided to improve the condition ers before and after confinement.

tment by artificial sunlight is afforded at five welfare centres for t mothers suffering from various discomforts of pregnancy and others post-natal debility and rheumatism. Children receive treatment for boils, asthma, rickets, anaemia, malnutrition and spastic paralysis.

science classes.

ery classes have long been a feature in municipal welfare centres and instruction in the preparation of meals and food values was given at res.

g classes were provided at 12 centres during 1953.

Attendances, etc.

Attendances at sessions held during 1953 with comparable figures for were as follows :—

	31st December, 1953	31st Decembe
Infant and toddlers' sessions:—		
Number of children on centre registers—		
Under 1 year	6,307	6,01
1 to 2 years	4,535	4,46
2 to 5 years	7,061	7,28
Total	17,903	17,77
Attendances made by children:—		
Under 1 year	104,537	102,03
1 to 2 years	21,313	23,18
2 to 3 years	13,243	13,75
3 to 4 years	9,132	10,21
4 to 5 years	6,279	7,15
Total attendances ..	154,504	156,35
Ante-natal sessions.		
Number of new attenders	6,914	7,15
Total number of attenders	9,467	9,74
Number of attendances	39,974	41,84
Post-natal sessions.		
Number of attenders	598	7
Number of attendances	608	1,0
Physiotherapy sessions.		
Ante-natal exercises:—		
Number of attendances	2,820	2,6
Post-natal exercises:—		
Number of attendances	347	5
Artificial sunlight treatment:—		
Number of attenders—		
Children	737 } 739	7
Adults	2 }	

Minor ailments.

207 children under five years of age were referred by the medical at welfare centres to school clinics for the treatment of minor ailments. C who fail to attend or cease attending before treatment is comple " followed-up " by health visitors who stress the desirability of treatme

The type of ailment and number of children referred for treatment i below.

Number of children referred for treatment of minor ailments.

Squint	117
Other eye affections	17
Otorrhoea	13
Other ear affections	4
Impetigo	35
Other skin affections	1
Miscellaneous	20

ried milk and vitamised foods.

Facilities are afforded to the Ministry of Food in all welfare centres for the stribution of National dried milk, cod liver oil, orange juice, etc. Proprietary ands of dried milk are also sold to mothers at the welfare centres and are pplied free in necessitous cases on the recommendation of the centre medical icer.

The dried milk supplied free during 1953 was £180. 2s. 0d. in value.

luntary workers.

42 voluntary workers made 1,363 attendances at welfare centres during the r and their useful assistance is greatly appreciated.

thercraft teaching exhibition.

The mothercraft teaching exhibition is used for demonstration purposes ing talks given by health visitors at welfare centres or for evening lectures. general contents are:—

(*a*) Nutrition—models of diet and posters referring to the expectant mother, weaning tray and posters, diets for children 2 to 5 years, models and posters showing food values, etc.

(*b*) Child health—growth and development, dentition models, prevention of disease, nursing of cases of infectious disease.

(c) Development through play—sense training, toys and posters for children aged 6 months to 5 years.

(*d*) Clothing—knitted first set, clothes for children aged 6 months to 5 years.

(*e*) Prevention of accidents—in the home and on the road, models of kitchen, garden, bathroom, bedroom, posters, etc.

This portion of the exhibition has been in great demand.

he exhibition also includes examples of work done by mothers attending craft classes at welfare centres, and at the Health Committee's welfare , Knowle House, where they are given a working knowledge of colour esign and advice and help in home decoration. Instruction is given in naking, embroidery, handloom weaving, leatherwork, glove making, aking, etc.

e sale of clothing patterns at welfare centres has decreased from 1,251 ns in 1952 to 808 in 1953. Excellent patterns are now available in shops veral types of cut-out patterns have therefore been discontinued.

here mothers need practical help in making clothes they are urged to the sewing classes held at welfare centres.

s' evening clubs.

ning clubs at Cheetham and Northenden Maternity and Child Welfare s have continued with the approval of the Health Committee.

object of these clubs is to allow mothers who normally attend the to meet in the evenings once a fortnight in a happy social atmosphere reby promoting a spirit of friendliness and cordiality. The activities lubs are educational and social and include—talks; discussions, various trations of a practical instructive nature, i.e. washing machines, sewing es, cookers, vacuum cleaners, etc.; social evenings; film show; tion visits; picnics and Christmas parties, and this year special Coronation for the children were arranged. Both clubs have their own library olish a news bulletin.

The committees and honorary officers are elected from the mothers.

The number of enrolled members is 66 at Cheetham and 62 at Northen

Contact is made between members of the two clubs by an interchang visits.

Children attending child welfare centres, 1953.

Centre	On register, January 1st 1953			New attendances during 1953			On register January 1 1954		
	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2 y
Abbey Hey	239	180	367	331	24	105	269	190	
Ancoats	98	79	85	130	21	30	87	56	
Ardwick	248	179	316	357	38	136	262	130	
Blackley	148	129	251	205	21	60	163	120	
Burnage (Duchess of York)	124	94	87	239	12	14	179	114	
Cheetham	223	156	254	293	56	173	227	145	
Chorlton-on-Medlock	226	138	145	290	71	107	230	147	
Chorlton-cum-Hardy	292	251	388	414	44	152	298	242	
Clayton	157	117	101	246	29	73	184	124	
Collyhurst	332	188	361	452	44	227	345	199	
Crumpsall	147	149	163	193	19	30	141	125	
Didsbury	247	168	308	258	28	69	204	184	
Gorton	310	191	228	402	33	105	305	176	
Harpurhey	236	179	278	330	24	124	246	168	
Higher Blackley	114	82	88	176	16	38	145	102	
Holy Name	53	42	55	143	29	49	104	80	
Hulme	142	110	209	235	62	127	182	115	
Levenshulme	304	246	489	460	46	194	346	241	
New Moston	197	158	135	259	24	61	210	133	
Newall Green	362	272	615	467	94	422	323	288	
Newton Heath	231	194	363	314	33	134	245	197	
Northenden	254	203	476	406	86	262	308	241	
Openshaw	312	201	193	415	71	148	304	222	
Rusholme	342	242	434	470	65	180	307	254	
Sharston	259	158	331	312	43	169	228	194	
Hart Road, Fallowfield	148	126	199	198	22	46	146	125	
Withington	274	235	369	418	49	150	319	223	
Totals	6,019	4,467	7,288	8,413	1,104	3,385	6,307	4,535	
Totals 1952	6,194	4,374	7,141	8,341	1,186	4,083	6,019	4,467	

Nurseries and Child Minders Regulation Act, 1948.

At the end of the year there were 3 persons registered as child minc care for a total of 26 children. No person applied for registration duri year and one person requested her name to be removed from the regi

Two factory nurseries are registered under the Act and they h accommodation for 60 children.

One voluntary nursery is also registered under the Act with accommc for 40 children. The City Council subsidises the maintenance of this under powers contained in Section 22, National Health Service Act, 19

Day minded children.

Unless a person concerned expresses a wish to be registered un Act, that person is not registered unless she looks after three or more c The number of such approved day minders is 3. The number of with the day minders is 6.

All persons and premises registered under the Act are visited regularly by dical officer and a health visitor on the staff of the Department and a health or makes routine visits to all children under 5 years of age who are known e day minded.

Care of illegitimate children and their mothers.

health visitor specially appointed for the purpose is responsible for re and social work concerning the care of illegitimate children and their ers. She receives part-time assistance as required from the general health ng staff. Her duties include investigation and advice and arrangements dmissions to the Health Committee's hostel at Knowle House, Handforth.

he sources of reference of the cases concerned are officers of the Health, ren's and Welfare Services Departments, hospital almoners, general al practitioners, and social workers of voluntary organisations. There se liaison with field workers and others connected with moral welfare isations in the City. These moral welfare organisations receive a *per* grant from the City Council in respect of cases with which they deal.

e following particulars indicate the work of the staff during the year and rison with the previous year.

	1953	1952
(1) Office interviews	1,155	1,093
Home visits	555	591
Visits to hospitals	77	69
Visits to Knowle House	76	62
Visits to Mayfield House	3	3
Visits to hostels of voluntary organisations	3	5
Interviews—social workers and health visitors	647	568
Attendances at Magistrates' Courts	88	81
Total visits and interviews	2,604	2,472
(2) Health visitors' records dealt with	3,093	4,148

(3) Number and classification of persons dealt with during the ante-natal period with results of confinement:—

	Live births	Births pending	Still-births	Mis-carriages	Total
	143	41	4	—	188
	32	12	—	1	45
	6	—	—	—	6
	8	3	—	—	11
arried before birth of baby	—	7	—	—	7
moved	—	16	—	—	16
Totals	189	79	4	1	273

(4) Number of mothers dealt with who have had illegitimate chil
697.

(5) Illegitimate children:—

Total number dealt with by the Welfare Officer—905, comprisi

224 children of mothers seen in post-natal period only.

189 children of mothers seen in ante-natal period during 1

49 children of mothers seen in the ante-natal period d
1952.

443 children whose cases were reinvestigated or carried fo
from previous years.

Particulars of illegitimate children remaining with their mothers.

Mothers	In lodgings or absorbed into family	With mother and putative father	With mother in a hostel	Parents subsequently married	Removed from Manchester	No trace	Deaths
Single	385	76	6	17	21	10	4
Married	112	47	—	—	1	3	1
Widow	14	4	—	1	—	—	—
Divorcee	16	2	—	2	2	—	2
Totals	527	129	6	20	24	13	7

Particulars of illegitimate children apart from their mothers.

Mothers	With adopters	With relatives	With foster mothers	Boarded out by Children's Committee	In residential nurseries (private)	In residential nurseries (Children's Committee)
Single	45	30	25	9	10	18
Married.. ..	5	11	4	3	4	1
Widow	4	—	—	—	—	1
Divorcee ..	3	1	1	—	—	4
Totals ..	57	42	30	12	14	24

The action taken by the Welfare Officer as regards cases referred
Department was as follows:—

Accompanied mothers and babies and expectant mothers to hostels, hospitals and residential nurseries 8

Admissions arranged to—

Knowle House Hostel 9

Voluntary hostels .. .. (

Hospitals 2

Ante-natal care arranged 2

Cases referred to—

Children's Department	101
Welfare Services Department	11
Mental Health Service	10
Poor Man's Lawyer Association	8
National Assistance Board	48
Probation officers	5
Catholic Moral Welfare Council	28
Catholic Adoption Society	38
Diocesan Council for Moral Welfare	13
Manchester and Salford Methodist Mission	9
National Society for the Prevention of Cruelty to Children	11
Manchester Employment Exchange	16
Manchester and District Adoption Society	13
Day Nursery Service	7

Assistance given—

To obtain legal advice	9
To obtain a vacancy in a day nursery	20
To find lodgings	8
To find a foster mother	4
To secure employment	6
Provision of perambulators and cots from departmental sources	7
Provision of clothing from departmental sources	40
Provision of clothing from voluntary sources	29
Provision of clothing from National Assistance Board	20

Advice given *re*—

Affiliation orders	126
National Health Insurance benefit	88
National Assistance	74
Hostel accommodation	120
Institutional accommodation	11
Private residential nursery accommodation	16
Adoption	160
Day nurseries	83
General matters	170

ular visits were paid to 77 families requiring close supervision.

on order cases.

pplications for affiliation orders were heard by the Manchester Magis-Court and were dealt with as shown:—

Assistance given by	Orders granted
elfare Officer	43
elfare Officer and Poor Man's Lawyer Association	3
elfare Officer and National Assistance Board	12
elfare Officer and private solicitors	3
Totals	61

Mother and Baby Home, "Knowle House," Handforth.

The primary reasons for admission to this home, which is administere the Health Committee, are:—

(*a*) Mother and baby homeless, either because prior to her confine the mother had been living in an institution, hostel or lodging had been engaged in residential employment.

(*b*) Relatives unwilling to allow the mother to return home with illegitimate baby.

(*c*) Overcrowded or unsatisfactory home conditions.

The Welfare Officer arranges for the admission of mothers and babi the home and is responsible for making suitable arrangements for them on discharge.

On the 1st of January, 1953, there were 8 mothers and 8 babies a expectant mother in " Knowle House " and from this date to 31st Decer 1953, 78 mothers were admitted with their babies (including twins), als expectant mothers and 2 convalescent mothers, making a total of 86 mo and 87 babies, 19 expectant mothers and 2 convalescent mot 81 mothers, 82 babies, 17 expectant mothers and 2 convalescent mo were discharged, leaving 5 mothers, 5 babies and 2 expectant mothers i home at the end of the year. The average stay was 7 weeks.

The following particulars show the arrangements made for the care c 82 babies discharged from " Knowle House ":—

Babies remaining with mother—	
In home of relatives	14
In residential domestic employment	2
In lodgings	11
In institutional accommodation	6
In hospital	1
Babies apart from mothers—	
In homes of adopters	28
In private residential nurseries	6
In the care oft he Children's Committee	5
In homes of foster mothers	7
In hospital	2

Recuperative centre.

By arrangement with the Community Council of Lancashire, mother children are admitted to the Brentwood Recuperative Centre, Marple, Che on recommendations of the Maternity and Child Welfare Section, the c maintenance being borne by the Health Committee. Since 5th July, provision for these arrangements has been made in the City Council's sc for prevention of illness, care and after-care under Section 28 of the Na Health Service Act, 1946.

Admission to the Centre during 1953 comprised 16 mothers whos were from 21 years to 39 years, 5 children under 1 year and 37 children 1 to 7 years.

In addition, after special requests from doctors at various hospital child welfare centres, 4 mothers and 4 children were admitted to S House, Pensarn, for special periods averaging about two weeks, also 14 ch for the same reason were admitted to Sefton Convalescent Home, Birker for various periods, ranging up to two months.

One family, after a special request, remained at Brentwood for six weeks, nd the other four families stayed for the full period normally allowed, which s four weeks.

The four primary reasons for recommending the mothers for admission to Brentwood are:—

(1) Lack of training and experience in housewifery and child management.

(2) Ill-health and lowered vitality, due to too-rapid child-bearing, depressing surroundings and environment and, possibly, in the case of some mothers, malnutrition.

(3) Unsatisfactory home conditions, including lack of domestic facilities.

(4) Difficulties between parents, causing the mother to lose interest in her home and children.

Marked improvement in both mental and physical condition of the family evident after a stay in Brentwood. In most cases the mothers look more ert and happy, find pleasure in household tasks, and the children benefit eatly from the training given in the Centre. By frequent visits from the alth visitor it is hoped to maintain and still further improve the standard living of these families.

DENTAL CARE OF MOTHERS AND YOUNG CHILDREN.

(Senior Dental Officer—James Byrom, L.D.S.)

The provision of dental care for mothers and young children attending ild welfare centres is made obligatory on the local health authority by the ational Health Service Act, 1946, Section 22.

In January of this year arrangements were completed with the Education mmittee for part use of the school dental staff and premises in five districts the City. Prior to this the Committee had part-time dental sessions only child welfare centres in Cheetham and Chorlton-on-Medlock and these are ll carried on; now, dental treatment is available at centres in Moston, venshulme, Northenden, Chorlton-on-Medlock (two), Cheetham and Hulme.

Patients are referred by the doctors at child welfare centres by completing ms which incorporate a certificate of fitness for general anaesthesia in a ital chair. Arrangements are elastic enough to permit of almost immediate atment of urgent cases.

The scheme started smoothly and there is now no long waiting list for ital attention and patients have the opportunity of comprehensive treatment, luding general anaesthesia and the fitting of dentures; these latter are made he Dental Laboratory in Shakespeare Street, Chorlton-on-Medlock. Thus, whole treatment is now in the hands of the Committee's professional f.

In some ways the first few years of a new scheme such as this may be ned to practice building and goodwill has to be fostered. The antipathy even hostility to preventive and conservative treatment has to be overcome this is not done overnight.

More surgery accommodation is needed in the north of the City and in the thenshawe area.

The Committee has agreed with the Education Committee to the j appointment of a dental hygienist who will work in the Shakespeare St premises. It is hoped that this expansion of the Service will take plac April, 1954.

No clinical research has been undertaken by the dental staff.

Statistical details of dental treatment given are shown below :—

(a) Numbers provided with dental care.

	Examined	Needing treatment	Treated	Ma dental
Expectant and nursing mothers ..	569	559	681	173
Pre-school children	1,812	1,735	1,783	900

(b) Forms of dental treatment provided.

	Extractions	Anaesthetics		Fillings	Scalings or scaling and gum treatment	Silver nitrate treatment	Dressings	Radiographs	Dentures p
		Local	General						Complete
Expectant and nursing mothers ..	1,131	75	48	101	84	1	30	—	37
Pre-school children	860	109	214	258	—	4,582	18	—	—

HEALTH VISITING.

Health visitors are concerned with the nutrition and developmen children under school age, the health and welfare of their mothers and he education, including the teaching of mothercraft. They have had additi duties since the advent of the National Health Service Act, 1946, and t responsibilities now include advice and assistance to all members of the fan

The enlarged scope of a health visitor's duties is particularly reflected example in work connected with aged and infirm persons and the after- of discharged hospital patients, which continued to expand during 1953.

In December, 1953, the health visitors had under observation 63,698 child under 5 years of age.

Notification of births.

The total number of notifications adjusted by transfer was 12,518, compri 12,175 live births and 343 still-births.

Total registered births numbered 12,573 and of these 800 were illegitim

It has been possible in 11,646 births (11,337 live births and 309 still-birt representing 93 per cent. of the total registered births in the City, to cons the place in the family of each birth, and this is shown in the following tal

Full-time and premature births have been separated, the standard b weight of 5½lbs. or under having been adopted in 1938.

Place in family	Live births				Live births		Still-births				Still-births		Live and still-births
	Legitimate		Illegitimate		1953	1952	Legitimate		Illegitimate		1953	1952	1953
	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Per. cent.
1st	3,246	287	234	39	33.57	34.22	43	47	5	7	33.01	39.18	33.55
2nd	2,885	207	127	20	28.57	28.72	32	41	1	3	24.92	19.75	28.47
3rd	1,717	119	91	5	17.04	17.47	23	24	—	2	15.87	15.99	17.01
4th	949	74	60	5	9.59	9.29	21	12	—	—	10.68	9.40	9.63
5th	464	39	27	6	4.73	4.73	13	5	1	—	6.14	6.58	4.77
6th	276	30	18	4	2.89	2.27	7	5	1	2	4.86	3.77	2.95
7th	161	9	11	—	1.59	1.33	5	3	—	—	2.58	1.88	1.62
8th	71	13	4	1	.79	.82	—	1	1	—	.65	1.57	.78
9th	41	6	6	1	.48	.46	—	1	—	—	.32	1.57	.47
10th	31	4	3	—	.35	.33	—	1	—	—	.32	—	.34
11th	14	2	—	—	.14	.15	—	—	—	—	—	.31	.14
12th	12	2	3	—	.15	.11	2	—	—	—	.65	—	.15
13th	5	—	—	—	.04	.05	—	—	—	—	—	—	.04
14th	4	1	—	—	.04	.02	—	—	—	—	—	—	.05
15th	1	—	—	—	.01	.01	—	—	—	—	—	—	.01
16th	1	—	—	—	.01	—	—	—	—	—	—	—	.01
17th	—	—	—	—	—	—	—	—	—	—	—	—	—
18th	—	—	—	—	—	.02	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—	—	—	—
21st	—	—	1	—	.01	—	—	—	—	—	—	—	.01
Totals	9,878	793	585	81	100.00	100.00	146	140	9	14	100.00	100.00	100.00

11,337

309

11,646

It is interesting to compare the size of the average family and the age of mother of each new investigated birth in 1953 as compared with 1935 w the analysis was first made. Tables for these two years are as follows:—

(1) Age of mothers at birth of children during 1953 showing place in family of each bir

Age groups	Place in family																	
Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	21
15—	402	67	3	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
20—	1,769	930	307	100	15	7	1	—	—	—	—	—	—	—	—	—	—	—
25—	1,118	1,199	710	370	131	61	29	8	3	3	—	1	1	—	—	—	—	—
30—	451	823	627	382	210	131	69	29	12	5	2	2	—	—	—	—	—	—
35—	136	228	256	206	139	94	62	35	18	15	11	10	4	3	—	1	—	—
40—	32	61	71	55	56	44	25	19	20	14	3	4	—	2	1	—	—	1
45—	—	4	6	6	3	5	1	—	2	2	—	2	—	—	—	—	—	—
50—	—	—	1	1	—	1	2	—	—	—	—	—	—	—	—	—	—	—
	3,908	3,312	1,981	1,121	555	343	189	91	55	39	16	19	5	5	1	1	—	1

(2) Age of mothers at birth of children during 1935 showing place in family of each bi

Age groups	Place in family																	
Years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19
15—	294	25	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20—	1,617	718	184	39	9	1	1	—	—	—	—	—	—	—	—	—	—	—
25—	1,419	1,054	540	253	97	44	19	2	2	—	—	—	—	—	—	—	—	—
30—	489	627	486	337	207	140	74	50	17	7	5	1	—	—	—	—	—	—
35—	118	288	235	194	159	132	111	88	65	30	16	6	4	1	2	—	—	—
40—	18	40	50	68	69	53	53	40	31	32	18	6	7	5	1	1	1	1
45—	—	2	—	5	9	6	4	1	6	7	5	5	4	3	1	—	—	—
	3,955	2,764	1,496	896	550	376	262	181	121	76	44	18	15	9	4	1	1	1

The 1953 births are further analysed to show the difference bet legitimate and illegitimate births, and live and still-births.

Age of mothers at birth of live children during 1953.

(A) *Place in family of each investigated birth (legitimate).*

Age groups Years	Place in family															Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
..	327	59	2	1	1	—	—	—	—	—	—	—	—	—	—	—	390
..	1 616	865	283	94	14	7	1	—	—	—	—	—	—	—	—	—	2,880
..	1,016	1,138	657	342	116	55	27	8	3	3	—	1	1	—	—	—	3,397
..	404	769	588	339	194	120	63	26	10	4	2	1	—	—	—	—	2,520
..	118	206	237	190	126	81	53	32	16	15	11	8	4	3	—	1	1,101
..	22	51	63	51	49	39	23	18	17	12	3	3	—	2	1	—	354
..	—	3	5	5	3	4	1	—	1	1	—	1	—	—	—	—	24
..	—	—	1	1	—	—	2	—	—	—	—	—	—	—	—		4
	3,533	3,091	1,836	1,023	503	306	170	84	47	35	16	14	5	5	1	1	10,670

(B) *Place in family of each investigated birth (illegitimate).*

Age groups Years	Place in family													Total births
	1	2	3	4	5	6	7	8	9	10	11	12	21	
.. .. ..	1	—	—	—	—	—	—	—	—	—	—	—	—	1
.. .. ..	67	5	1	—	—	—	—	—	—	—	—	—	—	73
.. .. ..	110	51	17	4	—	—	—	—	—	—	—	—	—	182
.. .. ..	47	34	35	18	13	4	1	—	—	—	—	—	—	152
.. .. ..	28	38	25	31	11	7	4	3	2	1	—	—	—	150
.. .. ..	14	13	12	11	6	8	4	2	1	—	—	1	—	72
.. .. ..	6	5	5	1	3	3	2	—	3	2	—	1	1	32
.. .. ..	—	1	1	—	—	—	—	—	1	—	—	1	—	4
	273	147	96	65	33	22	11	5	7	3	—	3	1	666

Age of mothers at birth of stillborn children during 1953.

(A) *Place in family of each investigated stillbirth (legitimate).*

Place in family											Total births
1	2	3	4	5	6	7	8	9	10	12	
4	3	—	—	—	—	—	—	—	—	—	7
36	13	7	2	1	—	—	—	—	—	—	59
24	26	17	10	2	1	1	—	—	—	—	81
18	15	14	12	5	4	2	—	—	—	1	71
4	8	6	5	6	3	5	—	1	—	1	39
4	5	3	3	4	2	—	1	—	—	—	22
—	—	—	1	—	2	—	—	—	1	—	4
90	70	47	33	18	12	8	1	1	1	2	283

(B) *Place in family of each investigated stillbirth (illegitimate).*

Age groups Years	Place in family						Total birth
	1	2	3	5	6	8	
15—	3	—	—	—	—	—	3
20—	7	1	—	—	—	—	8
25—	1	1	1	—	1	—	4
30—	1	1	—	—	—	—	2
35—	—	1	1	1	2	1	6
	12	4	2	1	3	1	23

Stillbirths.

The number of stillbirths allocated to the health visitors for investigat was 306.

Found children.

The health visitors found 1,682 other children belonging to families wl had moved into Manchester during the year. The year of their birth wa follows:—

646 born 1953.
398 ,, 1952.
273 ,, 1951.
216 ,, 1950.
149 ,, 1949.

Deaths.

431 deaths occurred amongst children under 5 years of age.

The classification according to age is:—

Children under 1 year	373
,, 1—2 years	23
,, 2—3 years	16
,, 3—4 years	11
,, 4—5 years	8

The distribution according to age of children who died under 1 year as follows:—

Died under 1 day	Died 1 to 7 days	Died 1 week to 4 weeks	Died 1 month to 3 months	Died 3 months to 6 months	Died 6 months to 9 months	Died 9 months to 12 months	To
120	108	27	50	38	15	15	3

The following table gives mortality rates for quinquennial period 1911–1 based upon the number of live births for the year. A table is also inclu showing mortality rates for measles and whooping cough.

Infant and child mortality rate per 1,000 live births.

Quinquennial periods 1911–1953

Quinquennial period	Infant mortality	Child mortality, 1—2 years	Child mortality, 2—5 years
-1915	133·13	45·0	35·5
-1920	104·51	34·9	34·3
-1925	95·85	34·2	23·9
-1930	87·88	26·2	20·9
-1935	77·34	18·3	17·6
-1940	70·81	11·3	11·3
-1945	63·85	6·3	8·1
-1950	48·34	3·3	3·8
.. ..	35·29	3·1	2·0
.. ..	34·28	3·2	2·8
.. ..	30·53	1·8	2·9

Infant and child mortality rate per 1,000 live births
and case mortality rates for measles and whooping cough.

	Infant mortality rate	Mortality rate 1—2 years	Mortality rate 2—5 years	Mortality rate 1—5 years	Total cases of measles		Total known cases of whooping cough	
					Cases	Mortality per cent	Cases	Mortality per cent
..	60·88	5·9	6·8	12·7	4,419	·27	3,277	1· 28
..	53·59	5·6	3·8	9·4	6,736	·13	2,003	1·30
..	55·80	3·7	6·0	9·7	5,596	·14	1,835	1·36
..	63·71	3·7	3·9	7·7	3,800	·08	2,265	1·41
..	59·76	4·1	3·4	7·5	9,008	·23	2,308	·78
..	42·12	3·2	3·9	7·1	10,650	·16	2,612	·73
..	38·24	2·7	4·5	7·2	6,485	·11	2,749	1·05
.	37·87	2·7	3·4	6·1	9,798	·08	4,187	·41
.	35·29	3·1	2·0	5·1	8,953	·01	2,255	·13
..	34·28	3·2	2·8	6·0	10,035	·06	2,636	·30
..	30·53	1·8	2·9	4·7	6,798	·03	2,112	·19

Expectant mothers.

Health visitors also visited at the end of six months all mothers who h given birth to a stillborn child or to a child who had died before reaching t age of one month, in order to ensure adequate ante-natal care should s subsequently become pregnant. 349 stillbirths and 269 neo-natal deaths occurr in the City during 1952, and 1,032 special visits were made by the hea visitors during 1952–53 to those mothers. In this way, 42 expectant moth who might require special care were brought to the notice of the Departme

Co-operation with School Health Service.

A report on every child reaching school age and known, on the hea visitor's final visit, to be suffering from medical defect or to have an unsa factory family history, is referred to the School Health Department; 694 su summaries were sent during the year, classified as follows:—

Unsatisfactory condition in child	460
History of tuberculosis in child	21
History of tuberculosis in family	193
History of rheumatism in child	7
History of rheumatism in family	10
Unsatisfactory history in family	3
Total	694

Defective children.

(1)	Total number of defective children from 0—5 years on the register on 31st December, 1953		994
(2)	Number of those who were born during 1953		184
(3)	The number in (2) who recovered	2	
	The number in (2) who died	49	
	The number in (2) who removed out of Manchester	5	
	Total number still on register on 31st December, 1953	128	
			184
(4)	Number of children who had during the year reached the age of 2 years and were referred to the School Health Service in accordance with the Education Act, 1944, Section 34		328
(5)	The number of children under five years of age notified during 1953 as suffering from poliomyelitis		4
(6)	Number in (5) who recovered..	1	4
(7)	Number in (5) suffering from paralysis and still requiring treatment	3	

Welfare of women and children on canal boats.

Manchester canal carrying companies do not allow women and chil on their boats, but women and children are still found on some of the " na boats."

Arrangements are made for an official at the Docks to inform the Health irtment when these boats are in the Docks, and in addition the health or makes an investigation each time she is in the area, and during the year y visits were paid but on only three occasions were there boats in, with en and children on board, as follows:—

Family 1. *Accomodation*—2 " narrow " boats. Condition, fairly clean.
Family seen previously in 1951 by health visitor.
Father in charge of family; looked healthy. Mother not seen—had gone to the Food Office.
Children—Boy 10 years, boy 9 years, just recovered from measles. Girl 3 years 10 months, girl 2 years, both with measles rash.
The general condition of the children appeared good but they had troublesome coughs and the father was advised to get a doctor to see them. Advice relating to isolation and disinfection was given.
The boats were moving on the same evening.

Family 2. *Accommodation*—2 " narrow " boats. Condition, fairly clean.
Father.
Mother.
Children—Boy 17 years, girl 13 years.
All healthy and weather-beaten.
Boats moving on to Salford the same day.

Family 3. *Accommodation*—2 " narrow " boats. Condition—clean, but cabins untidy.
Father.
Mother.
Children—Boy 11 years, girl 10 years: clothing satisfactory and fairly clean; have had very little schooling. Boy 4 years 10 months: tall, slim child; clothing satisfactory and clean; not vaccinated or immunised against diphtheria.
Mother invited to take youngest child to the Toddlers' Clinic at Hulme Child Welfare Centre.
All the family looked healthy; friendly, care-free type.

otal families—3.

otal children on board—9.

0—1 year	..	Nil	9 years	..	1
1—2 years	..	Nil	10 ,,	..	2
2—3 ,,	..	1	11 ,,	..	1
3—4 ,,	..	1	13 ,,	..	1
4—5 ,,	..	1	17 ,,	..	1

Care of aged and infirm persons.

ecial provision is made in the National Assistance Act, 1948, for securing ecessary care and attention for persons who:—

(*a*) are suffering from grave chronic disease or, being aged, infirm or physically incapacitated, are living in insanitary conditions ; and

(*b*) are unable to devote to themselves and are not receiving from other persons proper care and attention.

308 individual visits were paid by health visitors to 1,466 persons whose nstances were reported to be unsatisfactory and were brought to the of the Department, including 521 brought forward from last year.

dealing with these cases the Department continued to maintain close with the Welfare Services Department, the Manchester District Nursing ition and hospital almoners.

Details follow with regard to the action taken to deal with the cases rep
and the comparable figures for 1952:—

	1952	
Voluntary admissions to hospitals—		
Crumpsall	113	
Withington	127	
Springfield	3	
Newholme	2	
Manchester Royal Infirmary	7	
Ladywell	1	
Hope	2	
Ancoats	1	
Davyhulme	—	
Shaw Heath Hospital, Stockport	4	
Northern Hospital	1	
Jewish Hospital	1	
Wythenshawe	5	
Patricroft	1	
Bridgewater	1	
Jericho	—	
Royal Eye Hospital	—	
Devonshire Hospital, Buxton	—	
Christie Hospital	—	
Salford Royal	—	
Birch Hill Hospital, Rochdale	—	
Admitted to—		
Little Sisters of the Poor	1	
Private nursing homes	6	
Mayfield House	—	
Culcheth Homes	2	
Jewish Home for the Aged	1	
Red Cross Home	1	
Langho Colony	1	
Church Army Home	1	
Referred to—		
Mental Health Section	17	
Welfare Services Department	68	
Blind Aid Society	—	
Tuberculosis Section	1	
Sanitary Section	—	
Died before admission to hospital	78	
Recovered (nursed at home)	8	
Removed—no trace	3	
Removed to a relative's home	20	
Removed outside the Manchester area	2	
Compulsory removals under Section 47 of the National Assistance Act, 1948	17	
No further action necessary	41	
Carried forward at 1st January, 1954	521	
	1,058	1,
Total number of visits paid during period 1st January, 1952, to 31st December, 1952	3,211	
Total number of visits paid during period 1st January, 1953, to 31st December, 1953	—	5,

Particulars of persons dealt with under Section 47 of the National Assistance Act, 1948, and (Amendment) Act, 1951, during the year 1953.

16 new persons were dealt with during the year 1953.

11 persons were still under supervision at January 1st, 1953.

Total persons under supervision and dealt with during 1953, 27.

Brought forward from 1950		2	
,, ,, ,, 1951		4	
,, ,, ,, 1952		5	
Total number brought forward			11
New cases dealt with during 1953			16

1950 cases brought forward		2	
Settled in accommodation during 1953 and extension of Court Order not required	1		
Died	1		0
1951 cases brought forward		4	
Settled in accommodation during 1953 and extension of Court Order not required	4		0
1952 cases brought forward		5	
Settled in accommodation during 1953 and extension of Court Order not required	2		
Recovered—discharged home	1		
Court Order renewed	2		2
1953 new cases		16	
Settled in accommodation during 1953 and extension of Court Order not required	7		
Died	5		
Court Order still in force or being renewed	4		4

Summary of *all cases* under supervision and those dealt with for the first time during 1953.

12 of these were admitted to Part III accommodation.

4 of these were admitted to chronic sick wards.

Settled in accommodation during 1953 and extension of Court Order not required	14	
Died during the year	6	
Recovered—discharged home	1	
Court Order still in force or renewed	6	

Carried forward to 1954 from 1952		2	
,, ,, 1954 ,, 1953		4	
Total number carried forward			6

Section 47—National Assistance Act, 1948, and (Amendment) Act, 1951—Cases during 1953.

Sex	Age	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	90	Aged and infirm person. Suffering from a grave chronic disease.	3 weeks	Crumpsall Hospital.	Court Order taken out 7th January, 1953.	Extreme senility. Oedema of legs. Skin broken.	Died 10th January, 1953.
F.	78	Patient aged and infirm. Unable to devote to herself proper care and attention.	3 months	Part III Newholme.	Court Order taken out. 21st January, 1953.	Extreme senility.	April, 1953. Settled. Not necessary to renew Court Order.
F.	84	Aged and infirm person. Living in insanitary conditions.	3 months	Part III Newholme	Court Order taken out 18th February, 1953.	Blind. Elderly relative had attempted to care for patient, but it was too much for her.	20th May, 1953. Settled. Not necessary to renew Court Order.
F.	64	Living in insanitary conditions. Alone. In need of care and attention.	3 weeks	Part III Springfield.	Court Order taken out 24th February, 1953	Has relatives but they have not spoken to her for twenty years.	Court Order renewed 16th December, 1953.
M.	70	Patient living in insanitary conditions. In need of care and attention. Refuses to go into hospital.	3 weeks	Chronic sick bed. Withington Hospital.	Court order taken out 24th February, 1953.	Suffering from bronchitis, also was very undernourished.	Died 20th March, 1953.
F.	70	Living in insanitary conditions. Unable to care for herself.	3 months	Part III Newholme.	Court Order taken out 22nd April, 1953.	Son, 30 years, living at same address, would not take care of his mother.	8th July, 1953. Settled in Newholme. Not necessary to renew Court Order.
F.	82	Living in insanitary conditions. Unable to devote to herself proper care and attention.	3 months	Part III Springfield	Court Order taken out 13th May, 1953.	Using paraffin lamps. Left unattended. Room filled with old boxes and newspaper. No known relatives.	Settled in Springfield. No need to renew Court Order.
F.	75	Seriously ill. Living in insanitary conditions and not receiving proper care and attention.	3 weeks	Chronic sick bed. Crumpsall Hospital.	Court Order taken out 20th May, 1953.	Patient had gangrenous bedsores.	Died 9th June, 1953.
M.	68	Living in insanitary conditions. Unable to devote to himself proper care and attention.	3 months	Part III Newholme	Court Order taken out 17th June, 1953.	Undernourished and mentally confused. Very eccentric. Refused to allow anyone in the house.	Settled in Newholme. 24th August, 1953.

Sex	Age	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	72	Very neglected. Unable to devote to herself proper care and attention.	3 months	Chronic sick bed, Crumpsall Hospital	Court Order taken out 17th June, 1953.	Had chronic Arthritis. Living in furnished rooms. Separated from husband.	Settled in Newholme. 24th August, 1953.
F.	72	Aged and infirm. Living in insanitary conditions. Unable to devote to herself proper care and attention.	3 months	Part III Springfield	Court Order taken out. 22nd July, 1953.	Only near relative is a daughter who is an invalid and who requires constant attention herself.	Settled in Springfield. 13th October, 1953.
F.	85	Aged and infirm. Not able to care for herself and no one available to care for her.	3 weeks	Part III Newholme. (Later transferred to Withington Hospital).	Court Order taken out 3rd October, 1953.	Only relative—a niece in the south of England.	Died in Withington Hospital.
F.	88	Aged and infirm. Not able to care for herself, and no one available to care for her.	3 months	Part III Newholme	Court Order taken out 28th October, 1953.	Patient became very senile and could not be kept clean and properly cared for in spite of every effort by relatives to do this.	Court Order still being renewed.
F.	74	Aged and infirm. Living in insanitary conditions and unable to care for herself.	3 weeks	Part III Newholme	Court Order taken out 17th November, 1953.	Patient became very senile and unable to care for herself. House dirty and neglected. Patient began wandering in the streets at all hours and wearing insufficient clothing. No known relatives.	Court Order still being renewed. Date of last renewal 9th December, 1953
F.	67	Aged and infirm. Dirty and verminous. Confused in manner. Physically undernourished.	3 months	Part III Newholme	Court Order taken out 10th November, 1953.	Dirty in person, continually buying old clothes from rag and bone merchants, which infest the house with vermin. Family unable to manage patient. Married son living at the same address suffering from "Epilepsy." Family comprised—husband, son, daughter-in-law.	Court Order to be renewed in February, 1954, if if required.
M.	71	Dirty and neglected in person. Home very dirty. Unable to care for himself; lived alone.	3 months	Part III Newholme	Court Order taken out 16th December, 1953	Stone deaf. Not getting adequate diet.	Court Order to be renewed in March, 1954, if required.

Verminous conditions and scabies.

Persons treated for verminous conditions at Monsall Clinic.

Year	Males adult	Females adult	School children	Children under 5	Tot pers
1949	229	99	242	24	5
1950	319	133	202	13	6
1951	507	116	276	22	9
1952	460	112	260	25	8
1953	382	106	181	26	6

The Department has a scheme for supplying special steel combs at price to mothers and 21 steel combs were so distributed during 1953.

Scabies.

The main source of notification of scabies is the School Health Service many cases are brought to the notice of health visitors, either as contac those notified by the School Health Service or as new cases.

The source and number of notifications received during 1953 and preceding years were as follows:—

Sources of notification of scabies.

	1949	1950	1951	1952
School Health Service	276	140	162	156
Hospitals	24	6	8	21
General practitioners	158	130	107	100
Centre medical officers	30	4	4	9
Health visitors	70	10	3	18
Children's Department	—	—	1	—
Applied voluntarily	78	99	50	93
Discovered at Monsall Clinic	3	17	16	33
H.M. Forces	—	—	—	—
Salvation Army	—	6	1	—
Welfare Services Department	—	8	1	—
Sanitary Section	—	—	2	—
Ministry of Health	3	—	—	1
Business houses	2	—	1	1
Day nurseries	—	6	—	—
N.S.P.C.C.	—	—	—	3
Total	644	426	356	435

The number of persons treated at Monsall Clinic is shown in the follo table:—

Treatment for scabies.

Year	Males adult	Females adult	School children	Children under 5	Tot pers
1949	162	186	82	75	50
1950	93	143	76	79	39
1951	61	88	66	63	27
1952	143	166	117	144	57
1953	161	164	131	95	55

abies is treated by two applications of an emulsion of benzyl benzoate n interval of from one to four days between the first and second treatments.

e health visitor paid 217 visits to homes in which scabies occurred in

e Clinic received 159 visitors during the year for purposes of receiving ction and information. The visitors included district nurses, student s, student nursery nurses and nursing cadets.

National Society for the Prevention of Cruelty to Children.

e Department is again indebted to this Society for assistance in dealing certain difficult cases. During the year help has been obtained by many ers of the staff from decentralised Centres by personal contact, as well m central office.

Training of student health visitors.

n eight-months full-time course, approved by the Ministry of Health, is ged by the Manchester Municipal College of Technology in co-operation the Health Department.

students were entered for the examination of the Royal Sanitary Institute ay, 1953. Of these, 30 were successful at the first attempt, and, with one tion, the remaining students subsequently passed the examination.

students enrolled for the course which began in September, 1953, 13 sponsored by the City Council. Other students were sponsored by bouring local health authorities.

e students also gain practical experience in other departments of the authority such as the School Health, Welfare Services and Children's rtments. Observation visits are arranged to supplement the knowledge d in lectures. The students are given an insight into the work of a rural n visitor and spend some time in another county borough area outside chester.

n exhibition of the students' work was incorporated in the Annual sher Course for public health nurses and health visitors. The exhibition ded group theses and projects on a variety of subjects, including home ents, health and industry, juvenile delinquency and rheumatism. In addition ents and toys made at a minimum cost were on show.

health visitor tutor student from the Royal College of Nursing spent weeks gaining experience in the training course. Other visitors from country and overseas have been shown the work of the training centre.

Visits by health visitors, 1953.

Type or cause of visit	Nu
Primary visits	1
Subsequent visits	3
Children 1—2 years	2
Children 2—3 years	2
Children 3—4 years	2
Children 4—5 years	2
Children 5—14 years	
Special visits (not otherwise accounted for)	
Visits "out"	
Persons over 14 years	
Visits by centre superintendents—	
Ante-natal	
Post-natal	
Infants	
V.D. primary	
V.D. subsequent	
Total	16
Classified visits included in the above total—	
Children—removals	
Children—not seen	1
Ante-natal care—	
Stillbirths, primary	
Stillbirths, subsequent, Ex.	
Stillbirths, subsequent, N.P.	
Neonatal deaths, Ex.	
Neonatal deaths, N.P.	
Expectant mothers, primary visits	
Expectant mothers, subsequent visits	
Overcrowding and sanitary defects—	
Overcrowding	
Defects reported	
Special visits	
Scabies—	
Primary visits	
Subsequent visits	
Verminous conditions—	
Primary visits	
Subsequent visits	
Measles—	
Primary visits	
Subsequent visits	
German measles, primary visits	
German measles, subsequent visits	
Whooping cough—	
Primary visits	
Subsequent visits	
Pneumonia—	
Primary visits	
Subsequent visits	
Miscellaneous—	
Investigations *re* infantile diarrhoea	
Aged and infirm cases	
Wrong addresses—	
Infants	
Infectious diseases	
Investigation of V.D. primary	
Investigation of V.D. subsequent	
Total	2
Visits by student health visitors, included in total visits	
Number of child welfare centre sessions attended by health visitors	

NURSING HOMES REGISTRATION.

(Public Health Act, 1936, Sections 187—194)

1 nursing home was registered during the year; none was discontinued.

There was a total of 14 registered nursing homes at the end of the year, of ch four were registered for maternity patients, two for maternity, medical surgery patients and eight for medical and surgical patients.

Exemptions under Section 192 of the Public Health Act, 1936, were granted three voluntary hospitals.

A medical officer made regular visits to all registered nursing homes during year.

DAY NURSERIES

Accommodation is afforded for 1,406 children in the Health Committee's day nurseries. The day nursery at Prospect House was discontinued on 1 April, 1953, due to the termination of a lease, and all the children using nursery were found places in other day nurseries in the area.

The number of children on the day nursery registers was increased by a her 5 per cent. during the year, to a total of 15 per cent. above the number laces provided, in order to ensure that the best practical use is made of the ommodation. At the end of December, 1953, there were 1,641 children the registers and an average attendance of 1,356. There were 1,617 new issions and 1,572 discharges during 1953 and 304 children were admitted short term accommodation for the period of their mothers' stay in hospital. 3 children were on the waiting list for admission.

There was no change in the charges for accommodation, i.e. 3s. 0d. per where both parents are gainfully employed and 2s. 3d. per day where only parent is gainfully employed.

The system of priorities for admission also remained unchanged.

Each child has a medical examination before admission and further routine minations at intervals. The Department's medical officers made 6,548 such minations during the year.

Diphtheria and whooping cough immunizations were also afforded to dren in the day nurseries.

The incidence of infectious disease in children at day nurseries was materially than in the previous year. There was an extensive outbreak of Sonne ntery at one day nursery and precautions against this form of infection been intensified.

Every effort is made to avoid accidents to children in day nurseries, but ite care by the staff a number of minor accidents occurred, which all received ediate attention.

2 burglaries occurred during the year, which resulted in a considerable of rationed goods, as well as malicious damage.

Nine nurseries have been approved by the Ministry of Health for the ing of students for the certificate of the National Nursery Examination d, and under reciprocal arrangements with the Education Committee, nts are afforded full training in the care of children 0—5 years. All Health Committee students were successful in the 1953 examination.

Suitable members of the staff took the Warden's Course and others to the Child Care Reserve Course.

Arrangements were made for medical students and social science a administration students to attend at day nurseries in order to gain experien

The structural maintenance of buildings used as day nurseries contin to present many problems, particularly regarding prefabricated buildings, the least being the heavy expense involved. During 1953 a number of impro ments were effected to sanitary accommodation and other toilet facilities in day nurseries.

The use of private commercial laundries for nursery work was discontin during the year and all laundering is carried out in the Baths and Wash-hou Committee's Central Laundry.

TUBERCULOSIS SERVICE.

(Care and after-care)

The administrative offices for this section of the Health Department located at 352, Oxford Road, Manchester, 13. There is a very close co-operat between the Health Committee's scheme and the Regional Hospital Board, the local authority pays an agreed proportion of the Chest Physicians' sala for their work in the preventive aspects of the disease. The two departm share the same premises, the Regional Hospital Board paying an agreed to the Health Committee.

Under Section 28 of the National Health Service Act the local autho provides for:—

The visiting and supervision of tuberculous patients and their fami by 12 tuberculosis health visitors and 2 tuberculosis inspectors.

The loan of beds and bedding, free of charge, to assist treatment an secure the isolation of the patient.

The provision of food grants and clothing to patients and their fam whose incomes are below a set scale.

The loan of nursing requisites, free of charge, to patients on domicil care.

The free distribution of sputum boxes and flasks.

The disinfection of premises, bedding and clothing.

The loan of garden shelters.

The colonization of patients in village settlements.

Assistance in rehousing.

Financial advice in regard to entitlement to National Assistance, etc.

Co-operation with the Ministry of Labour in regard to the placin selected patients in suitable employment.

The City Council's scheme for the Tuberculosis Service includes, economic circumstances permit, the establishment of a night sanatorium patients who are capable of work during the day, but require accommoda where they can be kept under observation during the night. A workshop ex-patients is also envisaged, and the Ministry of Labour may assist in regard by the establishment of a " Remploy " factory in the City area.

Notification.

piratory tuberculosis.

In the year 1953 there was a slight increase in the number of new cases of piratory tuberculosis notified, the figure being 742 as compared with 717 in 2. 436 cases were notified amongst males, a reduction of 2 from the 1952 re. Females numbered 306, an increase of 27 over the total for 1952. e increases occurred in the age groups 15—19 (16) and 20—24 (13).

n-respiratory tuberculosis.

The number of notified cases has decreased from 96 in 1952 to 93 during 3, males numbering 40 and females 53.

Mortality.

The deaths from respiratory tuberculosis numbered 198, this being a uction of 71 from the figures in 1952.

The non-respiratory deaths totalled 18 as compared with 24 in 1952.

The following gives a brief summary of the work of the section:—

berculosis health visitors:—

Primary investigations	943
Routine domiciliary visits	19,718
Post-death visits	319
Special visits	1,599

me nursing:—

Number of patients	54
Number of visits	2,145

sistance to patients and families during 1953:—

Food grants	75
Loan of beds and bedding	115
Loan of nursing requisites	89

utum boxes issued 42,290

utum flasks issued 72

sinfections by Corporation:—

Premises	607
Bedding	66

using applications:—

Cases reviewed	520
Cases recommended	266
Families re-housed during the year	207

B.C.G. vaccination.

B.C.G. vaccination was commenced in the Spring of 1951 and the followi table shows how the work has proceeded:—

Year	Number of B.C.G. sessions	Number of Mantoux and Jelly Patch Tests	B.C.G. vaccinations
1951	64	2,044	507
1952	99	3,093	881
1953	93	3,382	872

A limiting factor in the work is the lack of segregation facilities for chi contacts who cannot be isolated from an infectious case for the require period of three months, and we have over 200 Mantoux negative childre precluded from B.C.G. vaccination for this reason.

The statistics for the year are shown in the following tables:—

Primary notifications of and deaths from tuberculosis.

Comparative figures 1933—1953.

(Rates per thousand of the population.)

Year	Primary notifications						General death rate, M/er.	Death rate all respiratory diseases except tuberculosis (M/er.)	Death rates, Tuberculosis Manchester					
	Respiratory			Non-respiratory					Respiratory			Non-respiratory		
	M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate			M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate
1933	1·75	1·06	1·39	0·42	0·38	0·40	13·65	1·97	1·29	0·82	1·04	0·13	0·13	0·13
1934	1·69	1·06	1·36	0·47	0·34	0·40	12·63	1·47	1·39	0·67	1·01	0·17	0·15	0·16
1935	1·59	1·00	1·28	0·40	0·38	0·39	13·53	1·73	1·21	0·72	0·95	0·13	0·12	0·13
1936	1·47	1·07	1·26	0·43	0·35	0·39	13·72	1·83	1·13	0·70	0·90	0·15	0·13	0·14
1937	1·73	1·03	1·36	0·52	0·46	0·49	13·87	1·70	1·14	0·72	0·92	0·18	0·14	0·16
1938	1·52	0·98	1·24	0·41	0·36	0·38	12·61	1·32	1·07	0·66	0·86	0·14	0·13	0·14
1939	1·49	0·96	1·21	0·40	0·36	0·38	13·39	1·30	1·10	0·64	0·86	0·16	0·13	0·14
1940	1·95	1·13	1·51	0·41	0·36	0·38	17·98	4·00	1·43	0·78	1·09	0·16	0·13	0·15
1941	2·12	1·16	1·61	0·45	0·41	0·43	16·64	2·81	1·45	0·84	1·13	0·19	0·19	0·19
1942	1·78	1·22	1·48	0·37	0·41	0·39	14·72	2·13	1·23	0·76	0·99	0·14	0·12	0·13
1943	1·78	1·25	1·50	0·41	0·49	0·45	15·50	2·64	1·14	0·71	0·91	0·16	0·15	0·16
1944	1·62	1·14	1·37	0·33	0·36	0·34	14·20	2·04	0·95	0·66	0·80	0·13	0·10	0·11
1945	1·73	1·23	1·46	0·34	0·31	0·32	14·41	2·33	1·00	0·62	0·80	0·16	0·10	0·13
1946	1·56	0·89	1·20	0·28	0·22	0·25	13·52	2·09	0·92	0·48	0·69	0·08	0·12	0·10
1947	1·41	0·91	1·15	0·21	0·18	0·19	13·79	2·11	0·88	0·46	0·66	0·11	0·08	0·09
1948	1·50	1·01	1·24	0·19	0·21	0·20	12·27	1·80	0·89	0·50	0·69	0·06	0·08	0·07
1949	1·58	1·02	1·28	0·20	0·24	0·22	12·91	2·10	0·76	0·45	0·60	0·06	0·04	0·05
1950	1·28	0·84	1·05	0·21	0·17	0·19	12·77	1·86	0·77	0·42	0·58	0·07	0·06	0·07
1951	1·23	0·82	1·02	0·13	0·17	0·15	13·82	2·50	0·61	0·32	0·45	0·05	0·06	0·06
1952	1·32	0·75	1·02	0·13	0·14	0·14	12·16	1·70	0·59	0·20	0·38	0·04	0·03	0·03
1953	1·32	0·83	1·06	0·12	0·14	0·13	12·31	1·86	0·39	0·19	0·28	0·04	0·02	0·03

Tuberculosis (pulmonary and non-pulmonary).

Incidence and deaths in age groups for the years 1930 to 1953.

Year	0 —				1 —				5 —				15 —				45 —				65 —				Total				Total	
	Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		All forms	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1930	2	5	17	10	11	5	87	47	91	15	159	27	799	543	143	58	324	297	36	16	36	33	4	5	1,263	898	446	163	1,709	1,061
1	1	4	10	10	10	4	83	42	135	17	174	19	762	525	179	45	296	276	28	13	25	35	7	4	1,229	861	481	133	1,710	994
2	1	2	6	7	24	11	69	35	60	14	130	28	710	455	154	33	243	254	26	11	23	30	3	5	1,061	766	388	199	1,449	885
3	3	2	6	8	11	10	46	19	44	13	110	15	701	498	120	45	268	245	21	10	26	23	1	3	1,053	791	304	100	1,357	891
4	—	4	7	9	8	8	52	23	54	12	105	27	666	449	120	50	258	252	17	9	40	36	2	2	1,026	761	303	120	1,329	881
5	3	4	3	3	8	2	45	17	62	11	98	15	611	430	120	42	253	230	22	16	20	37	6	1	957	714	294	94	1,251	808
6	1	1	4	6	5	3	50	21	49	17	98	25	615	396	109	36	235	223	25	15	32	31	3	2	937	671	289	105	1,226	776
7	1	2	9	6	11	7	53	22	48	5	100	19	635	396	165	44	261	213	22	17	45	51	9	7	1,001	674	358	115	1,359	789
8	6	1	9	10	7	3	38	15	54	8	87	24	577	350	124	29	231	235	18	15	32	30	6	6	907	627	282	99	1,189	726
9	3	1	3	3	8	3	43	23	34	6	66	14	559	355	126	41	205	202	22	14	40	34	5	5	849	601	265	100	1,114	701
1940	3	3	2	3	4	1	28	21	31	6	68	13	620	408	112	39	242	208	23	11	43	52	6	4	943	678	239	91	1,182	769
1	3	—	3	2	14	5	46	35	36	6	68	18	610	366	124	42	266	241	13	11	39	61	4	7	968	679	258	115	1,226	794
2	—	1	2	5	5	1	31	15	35	5	57	12	615	338	119	34	209	206	24	9	30	41	1	5	894	592	234	80	1,128	672
3	1	1	4	3	11	2	29	20	29	4	68	14	614	291	138	41	211	212	26	13	34	36	7	2	900	546	272	93	1,172	639
4	2	—	3	5	18	3	32	13	41	4	39	12	522	275	114	21	213	174	20	14	44	35	3	3	840	491	211	68	1,051	559
5	3	3	6	4	19	2	28	22	35	7	57	14	606	257	91	28	213	177	15	8	37	50	3	5	913	496	200	81	1,113	577
6	5	3	5	9	12	—	29	14	44	3	44	10	517	232	71	22	195	171	13	11	32	51	6	1	805	460	168	67	973	527
7	3	4	2	6	24	5	17	14	60	1	38	9	482	236	59	25	190	176	13	6	27	28	5	4	786	450	134	64	920	514
8	4	2	3	5	33	5	16	8	42	3	36	8	545	261	66	14	198	176	18	6	41	30	2	8	863	477	141	49	1,004	526
9	7	1	—	3	29	4	17	7	62	—	36	4	566	220	81	14	194	150	12	6	41	43	8	4	899	418	154	38	1,053	456
1950	6	—	1	2	32	3	22	7	48	2	34	2	449	210	61	23	166	159	10	8	36	37	4	5	737	411	132	47	869	458
1951	11	2	2	2	38	—	13	7	48	—	20	6	449	134	56	15	146	134	11	7	19	48	3	2	711	318	105	39	816	357
1952	4	—	1	1	40	4	14	5	76	—	27	4	416	91	46	5	151	130	6	6	30	44	2	3	717	269	96	24	813	293
1953	7	—	2	—	33	1	7	2	63	—	28	—	460	67	38	8	143	96	14	7	36	34	4	1	742	198	93	18	835	216

Tuberculosis (non-respiratory)—new cases notified during 1953—Age groups and site.

Age Groups	Location of disease.																	
	Meninges		Miliary		Abdomen		Bones joints		Vertebral column		Lymphatic system		Genito-urinary		Other sites		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
0— 4	—	—	—	—	—	—	2	2	1	—	—	3	—	—	1	—	4	5
5— 9	—	3	—	—	—	—	1	2	1	—	3	5	—	—	—	—	5	10
10—14	—	1	—	—	1	1	2	1	2	—	3	1	—	1	—	—	8	5
15—19	—	—	—	—	—	3	—	1	1	1	1	2	1	1	1	—	4	8
20—24	—	—	—	—	—	—	—	—	1	1	—	1	2	—	—	—	3	2
25—34	—	—	—	—	—	2	—	1	1	2	2	1	3	3	2	—	8	9
35—44	—	—	—	—	—	1	—	—	—	—	1	—	1	—	—	1	2	2
45—54	—	—	—	—	—	—	3	—	—	3	—	—	—	1	—	1	3	5
55—64	—	—	—	—	—	—	1	—	—	2	—	1	—	1	—	1	1	5
65—	—	—	—	—	—	—	1	—	—	2	1	—	—	—	—	—	2	2
Totals ..	—	4	—	—	1	7	10	7	7	11	11	14	7	7	4	3	40	53

Sources of notification of tuberculosis during 1953.

Source	Respiratory	Non-respiratory	Totals
te practitioners	361	6	367
Clinic staff	112	3	115
al hospitals	227	68	295
l hospitals	5	—	5
oria	8	16	24
Forces	28	—	28
sources	1	—	1
Totals	742	93	835

Tuberculosis.

Primary notifications and deaths—1953.

Classification in municipal wards.

Ward	Estimated population	Persons per acre	Notifications						Deaths (all forms)	
			Respiratory		Non-respiratory		Total all forms	Rate per 1,000 pop.	No. (Manchester figures)	Rate per 1,000 pop.
			M.	F.	M.	F.				
Park	21,758	27·89	8	7	2	—	17	0·78	6	0·28
	18,848	59·83	21	23	2	2	48	2·55	9	0·48
	17,899	41·05	19	7	—	1	27	1·51	5	0·28
r	15,236	13·60	11	6	—	—	17	1·12	6	0·39
	19,480	80·16	14	10	—	4	28	1·44	6	0·31
	20,594	16·80	14	9	1	1	25	1·21	5	0·24
	22,945	29·72	18	9	1	4	32	1·39	7	0·31
	22,177	30·09	12	8	—	1	21	0·95	4	0·18
	14,284	32·03	1	5	2	1	9	0·63	5	0·35
m-Hardy	20,030	23·59	9	5	1	1	16	0·80	3	0·15
hurch	13,879	27·70	10	7	1	—	18	1·30	3	0·22
	22,024	12·20	16	6	1	3	26	1·18	2	0·09
	17,292	14·64	7	5	—	1	13	0·75	1	0·06
h	22,994	42·58	9	6	2	3	20	0·87	3	0·13
h	17,493	27·72	9	9	1	1	20	1·14	5	0·29
	18,744	50·39	9	5	1	1	16	0·85	11	0·59
e	19,492	32·17	9	6	—	—	15	0·77	4	0·21
	20,304	52·06	11	6	—	1	18	0·89	9	0·44
	15,755	44·38	11	10	—	1	22	1·40	8	0·51
g	14,813	33·36	8	4	—	2	14	0·95	5	0·34
ast	19,390	70·00	14	6	—	—	20	1·03	8	0·41
Vest	18,532	69·15	14	11	2	1	28	1·51	3	0·16
	20,464	17·49	12	8	2	—	22	1·07	5	0·24
	14,444	40·80	17	17	1	2	37	2·56	12	0·83
th	19,106	21·11	7	6	2	—	15	0·78	6	0·31
	19,572	39·30	14	16	3	5	38	1·94	8	0·41
	23,507	10·54	14	11	1	1	27	1·15	6	0·26
	17,077	27·37	7	5	—	1	13	0·76	7	0·41
	22,824	42·03	12	8	3	1	24	1·05	3	0·13
	17,207	23·70	6	3	1	3	13	0·76	—	—
	19,335	60·80	19	13	1	1	34	1·76	5	0·26
	18,258	63·62	15	14	1	1	31	1·70	7	0·38
	21,439	41·47	20	9	—	5	34	1·59	9	0·42
	11,728	14·01	5	2	1	—	8	0·68	7	0·60
	15,295	27·31	7	1	1	—	9	0·59	6	0·39
e	47,581	14·03	24	23	6	4	57	1·20	17	0·36
	—	—	3	—	—	—	3	—	—	—
Manchester	701,800	25·75	436	306	40	53	835	1·19	216	0·31

Primary notifications respiratory tuberculosis—1953.
Occupation and social classification.*

Males: Social Class 1	2	3	4	5	Total	OCCUPATIONAL GROUP	Single Women: Social Class 1	2	3	4	5	Total	Married Women: Social Class 1	2	3	4	5	Total	Total Women	Total Both Sexes
—	—	—	—	—	—	Fishermen	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	1	—	1	Agricultural, hortieultural and forestry occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	1	—	—	1	Mining and quarrying occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	1	—	—	1	Workers—Non-metalliferous mining products (not coal)	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	—	4	—	4	Coal gas, coke makers, workers in chemical and allied trades	—	—	—	—	—	—	—	—	—	—	—	—	—	4
—	—	65	2	—	67	Workers in metal manufacture, engineering and allied trades	—	—	2	1	—	3	—	—	2	—	—	2	5	72
—	—	2	1	—	3	Textile workers	—	—	—	1	—	1	—	—	1	3	—	4	5	8
—	—	2	—	—	2	Tanners, etc., leather goods makers, fur dressers	—	—	1	—	—	1	—	—	—	—	—	—	1	3
—	—	4	1	—	5	Makers of textile goods and artieles of dress (not hoots, shocs)	—	—	4	21	—	25	—	—	3	15	—	18	43	48
—	—	1	—	—	1	Makers of foods, drinks and tobaeco	—	—	—	1	—	1	—	—	—	—	—	—	1	2
—	—	2	—	—	2	Workers in wood, cane and cork	—	—	—	—	—	—	—	—	—	—	—	—	—	2
—	—	3	—	—	3	Makers of and workers—Paper, paperboard: bookbinders, printers	—	—	4	3	—	7	—	—	1	—	—	1	8	11
—	—	8	—	—	8	Makers of produets (not elsewhere specified)	—	—	4	—	—	4	—	—	-	—	—	—	4	12
—	—	5	—	7	12	Workers in building and contracting	—	—	—	—	—	—	—	—	—	—	—	—	—	12
—	—	11	1	—	12	Painters and decorators	—	—	—	—	—	—	—	—	—	—	—	—	—	12
—	3	—	—	—	3	Administrators, directors, managers (not elsewhere specified)	—	—	—	—	—	—	—	—	—	—	—	—	—	3
—	1	19	9	7	36	Persons employed in transport and communications	—	—	5	—	—	5	—	—	—	—	1	1	6	42
—	4	15	1	1	21	Commercial finance and insurance occupations (not clerks)	—	—	10	—	—	10	—	1	9	—	—	10	20	41
4	7	3	—	—	14	Professional and technical occupations (not clerks)	—	7	5	—	—	12	—	—	—	—	—	—	12	26
—	—	26	—	3	29	Persons employed in defence services	—	—	1	—	—	1	—	—	—	—	—	—	1	30
—	—	1	—	—	1	Persons professionally engaged in entertainments and sport	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	2	3	5	2	12	Persons engaged in personal service (including institutions, clubs, etc.)	—	—	1	2	—	3	—	—	7	1	5	13	16	28
—	3	26	—	—	29	Clerks, typists, etc.	—	—	25	—	—	25	—	1	8	—	—	9	34	63
—	—	7	3	—	10	Warehousemen, storekeepers, packers, hottlers	—	—	—	4	—	4	—	—	—	1	—	1	5	15
—	—	1	4	—	5	Stationary engine, crane and tractor drivers, stokers, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	5
—	—	—	1	38	39	Workers in unskilled occupations (not elsewhere specified)	—	—	—	2	4	6	—	—	—	—	2	2	8	47
—	—	—	9	1	10	Other and undefined workers	—	—	—	3	—	3	—	—	—	2	—	2	5	15
4	20	206	42	59	331	Totals	—	7	62	38	4	111	—	2	31	22	8	63	174	505
—	—	—	—	—	22	Retired	—	—	—	—	—	—	—	—	—	—	—	—	—	22
—	—	—	—	—	15	No occupations (inmates of institutions, etc.)	—	—	—	—	—	2	—	—	—	—	—	—	2	17
—	—	—	—	—	23	Infants (0—4 years)	—	—	—	—	—	17	—	—	—	—	—	—	17	40
—	—	—	—	—	41	School children	—	—	—	—	—	27	—	—	—	—	—	—	27	68
—	—	—	—	—	4	Students	—	—	—	—	—	1	—	—	—	—	—	—	1	5
—	—	—	—	—	—	Household duties	—	—	—	—	—	5	—	—	—	—	—	80	85	85

	Respiratory			Non-respiratory			Total			Grand total
	M.	F	C.	M.	F.	C.	M.	F.	C.	
New patients examined in the year (excluding "transfers in" and "contacts")	..	..	..	..	..	..	2848	2600	637	6085
Number of contacts examined in the year (excluding "transfers in")	..	..	..	..	..	..	610	807	891	2308
Totals	..	..	..	..	..	..	3458	3407	1528	8393
Number diagnosed as tuberculous in year (excluding "contacts")	411	266	99	..	2	5	411	268	104	783
Number of contacts diagnosed as tuberculous during the year	7	22	14	..	..	..	7	22	14	43
Totals	418	288	113	..	2	5	418	290	118	826
Number removed from the register as "Recovered" during the year	126	106	31	24	19	15	150	125	46	321
Number of cases on the register at 1st January, 1953	2225	1800	420	140	169	105	2365	1969	525	4859
Number of cases on the register at 31st December, 1953	2259	1803	436	68	76	45	2327	1879	481	4687
Number of patients on the register awaiting admission to a tuberculosis institution at 31st December, 1953	43	39	4	..	2	1	43	41	5	89

Total attendances at the clinic	39,113
Number of clinical sessions	1,272

CASES ON NOTIFICATION REGISTER.

(At January, 1954).

City Ward	Respiratory		Total	Non-respiratory		Total
	Active	In-active		Active	In-active	
Alexandra Park	85	30	115	6	6	12
All Saints'	103	32	135	13	8	21
Ardwick	79	19	98	8	11	19
Barlow Moor	53	36	89	3	3	6
Beswick	77	19	96	10	7	17
Blackley	114	33	147	8	5	13
Bradford	91	42	133	9	7	16
Burnage	80	39	119	7	6	13
Cheetham	56	21	77	5	6	11
Chorlton-cum-Hardy	58	29	87	5	1	6
Collegiate Church	86	21	107	5	2	7
Crumpsall	94	25	119	5	6	11
Didsbury	45	16	61	1	2	3
Gorton North	84	23	107	9	5	14
Gorton South	66	28	94	7	7	14
Harpurhey	70	14	84	5	8	13
Levenshulme	57	23	80	6	9	15
Lightbowne	60	16	76	9	6	15
Longsight	60	22	82	4	9	13
Miles Platting	54	10	64	6	6	12
Moss Side East	84	41	125	8	5	13
Moss Side West	99	30	129	15	12	27
Moston	84	35	119	5	6	11
New Cross	72	14	86	4	5	9
Newton Heath	70	23	93	6	12	18
Newtown	80	26	106	12	12	24
Northenden	260	83	343	10	19	29
Old Moat	90	38	128	8	8	16
Openshaw	96	33	129	5	9	14
Rusholme	53	26	79	7	5	12
St. George's	80	29	109	9	12	21
St. Luke's	86	24	110	7	11	18
St. Mark's	101	32	133	9	11	20
St. Peter's	38	11	49	4	4	8
Withington	41	18	59	3	1	4
Wythenshawe	536	223	759	34	42	76
Totals—January, 1954	3,342	1,184	4,526	277	294	571
January, 1953	3,253	1,134	4,387	431	213	644
January, 1952	2,983	1,338	4,321	505	412	917
March, 1951	2,848	1,684	4,532	570	576	1,146
March, 1950	2,798	1,568	4,366	571	571	1,142

Summary of notifications of tuberculosis during the period 1st January to 31st December, 1953, in the City.

Age periods	Formal notifications													
	Number of primary notifications of new cases of tuberculosis													
	0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	Totals (all ages)
ory, males	4	5	14	18	19	55	55	72	53	65	49	26	1	436
ory, females	3	3	11	12	14	63	68	70	24	15	14	6	3	306
ratory, males	—	—	4	5	8	4	3	8	2	3	1	1	1	40
ratory, females	2	—	3	10	5	8	2	9	2	5	5	1	1	53

New cases of tuberculosis coming to the knowledge of the Medical Officer of Health during the above-mentioned period, otherwise than by formal notification.

Source of information			Number of cases in age groups												
			0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	Totals
returns from l registrars	Respiratory	M.	—	—	—	—	—	—	—	—	—	4	6	5	1	16 (A)
		F.	—	—	—	—	—	—	—	2	1	2	2	—	1	8 (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	1	—	1	—	—	—	2 (C)
		F.	—	—	—	—	—	1	1	—	—	1	—	1	—	4 (D)
returns from trar-General erable deaths)	Respiratory	M.	—	—	—	—	—	—	—	—	—	2	—	—	—	2 (A)
		F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	—	—	1	—	—	—	1 (C)
		F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (D)
sthumous tifications	Respiratory	M.	—	—	—	—	—	—	—	—	—	6	4	—	—	10 (A)
		F.	—	—	—	—	—	—	—	1	—	—	1	—	1	3 (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	—	1	1	—	—	—	2 (C)
		F.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (D)
sfers " from reas (excluding erable deaths)	Respiratory	M.	—	—	1	1	—	—	6	16	10	3	8	—	—	45 (A)
		F.	—	—	—	2	—	2	6	10	1	1	—	1	—	32 (B)
	Non-respiratory	M.	—	—	—	—	—	—	1	1	—	—	—	—	—	2 (C)
		F.	—	—	—	1	—	1	—	1	—	—	—	—	—	3 (D)
r sources	Respiratory	M.	—	—	—	1	—	—	—	2	—	—	—	—	—	3 (A)
		F.	—	—	—	—	—	—	1	—	—	—	—	—	—	1 (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	1	—	—	—	—	—	1 (C)
		F.	—	—	1	—	—	—	1	1	—	—	—	—	—	3 (D)

Totals of cases		
	(A) Respiratory, male	76
	(B) Respiratory, female	44
	(C) Non-respiratory, male	8
	(D) Non-respiratory, female	10

Primary notifications—respiratory tuberculosis.
Age, incidence and classification of cases seen by Chest Physicians.
(Ministry of Health Circular 83/47 (1).)

Males.

Age group	Respiratory A				Respiratory B				Total cases classified	Cases not classified for various reasons (2)	Total notifi
	1	2	3	Total	1	2	3	Total			
Under 1 yr.	3	1	—	4	--	—	—	—	4	—	
1—2 yrs.	1	2	1	4	—	—	—	—	4	1	
2—4 yrs.	9	1	—	10	1	—	1	2	12	2	
5—9 yrs.	13	—	1	14	—	1	—	1	15	3	
10—14 yrs.	15	1	1	17	—	—	—	—	17	2	
15—19 yrs.	5	20	2	27	2	15	3	20	47	8	
20—24 yrs.	5	20	—	25	2	18	3	23	48	7	
25—34 yrs.	5	13	3	21	1	38	8	47	68	4	
35—44 yrs.	—	4	—	4	1	37	9	47	51	2	
45—54 yrs.	—	8	—	8	1	34	14	49	57	8	
55—64 yrs.	1	3	—	4	—	23	9	32	36	13	
65— yrs.	—	—	3	3	—	8	5	13	16	11	
Totals ..	57	73	11	141	8	174	52	234	375	61	4
% 1953	15·2	19·5	2·9	37·6	2·1	46·4	13·9	62·4	100		
% 1952	14·6	13·3	2·5	30·5	5·0	46·3	18·1	69·5	100		

Females.

Under 1 yr.	—	1	—	1	—	—	—	—	1	2	
1—2 yrs.	2	—	1	3	—	—	—	—	3	—	
2—4 yrs.	6	2	1	9	—	—	—	—	9	2	
5—9 yrs.	7	2	1	10	1	—	—	1	11	1	
10—14 yrs.	6	4	1	11	—	2	—	2	13	1	
15—19 yrs.	8	25	1	34	2	13	4	19	53	10	
20—24 yrs.	6	22	1	29	—	31	3	34	63	5	
25—34 yrs.	5	12	2	19	2	36	7	45	64	6	
35—44 yrs.	2	3	1	6	—	13	2	15	21	3	
45—54 yrs.	—	1	—	1	—	8	3	11	12	3	
55—64 yrs.	—	—	—	—	—	8	3	11	11	3	
65— yrs.	—	—	—	—	—	3	3	6	6	3	
Totals ..	42	72	9	123	5	114	25	144	267	39	
% 1953	15·7	27·0	3·4	46·1	1·9	42·7	9·4	54·0	100		
% 1952	21·3	22·1	2·8	46·2	4·7	39·1	9·9	53·7	100		

CLASSIFICATION TABLE—NOTES.

(1) CLASS A.— Cases in which tubercle bacilli have never been discovered in any exudate, excrement, discharge

CLASS B.— Cases in which tubercle bacilli have been found at any time in any exudate, excrement, discharge

GROUP 1.— Cases with slight constitutional disturbance.

GROUP 3.— Cases with profound systematic disturbance or constitutional deterioration and with marked impa function, either local or general.

GROUP 2.— All cases which cannot be placed in groups 1 and 3.

(2) In this column are included cases (*a*) where death occurred immediately after notification and before t Physician had opportunity to see the patient; (*b*) service cases; (*c*) cases in mental hospitals, etc., etc.

EPILEPSY AND CEREBRAL PALSY.

l cases brought to the notice of the Department are referred at the age ears to the School Health Service in accordance with the provisions of n 34, Education Act, 1944. In children under 5 years, 24 cases of epilepsy cases of cerebral palsy were reported and referred accordingly.

child born in 1953 was reported to be suffering from either of these s.

e following statement shows the numbers of children between the ages years and 16 years who were ascertained to be suffering from these s:—

	Epilepsy.	
Handicapped children	(*a*) in Soss Moss School	47
	(*b*) attending ordinary schools but under clinic supervision	73
	Cerebral palsy.	
Handicapped children	(*a*) in Margaret Barclay Residential School..	17
	(*b*) in Lancasterian Day Special School ..	58
	(*c*) under orthopaedic treatment at clinics..	13

e figures relate to children found to be suffering from these two defects o not necessarily indicate the incidence of either disease in the City as condition is notifiable. There may be, for example, children suffering o severe or so slight epilepsy or birth injury that they may never have rought to the notice of the Department, particularly children over 10 years

sidential provision for sane epileptics aged 16 years or over, of both is made under the terms of Part III, National Assistance Act, 1948, at rporation's Langho Colony for sane epileptics. Details of the accom- ion and facilities provided at this establishment are given earlier in the

HOME NURSING SERVICE.

e Manchester District Nursing Institution provides the general service of nurses under an agency agreement with the City Council. The General ary of the Institution and the Senior Superintendent of home nursing he necessary liaison with the appropriate officers of the Corporation and ber of the Institution's Committee is also a co-opted member of the sub- ittee of the Health Committee which administers the home nursing as a whole.

e City Council has a special nursing service for home nursing of the ulous, the care of premature babies and the care of children under 5 years equire the attention of ophthalmic nurses. Suitably qualified staffs are yed for these purposes by the Health Committee and particulars of their are included elsewhere in this report.

e following information has been supplied by the General Secretary of lanchester District Nursing Institution and gives particulars as to the l part of the home nursing service for the year 1953.

A. Nursing staff.

The average number of district nurses at work was 82¼, of whom 70 whole-time and 12 part-time, giving an equivalent whole-time strength

This figure of 76¼ is analysed into :—

(*a*) *Nursing grades*—

	1953	1952	31
Queen's Senior Superintendent of home nursing ..	1	1	
Queen's superintendents	4	4	
Queen's assistant superintendents	2¾	2½	
Queen's female nurses	32½	33¼	
Queen's male nurses	10	10	
Student district nurses	6	11¼	
State registered nurses	14	12	
State enrolled assistant nurses	6	8	
	76¼	82	

(*b*) *Accommodation*—

Resident in large district nurses' home or centre under control of superintendent	30	32
Non-resident, but working from nurses' home or centre under control of a superintendent	38¼	36
Operating on "single" or "double" districts under ultimate control of Senior Superintendent	8	14
	76¼	82

B. Statistics of nursing work.

Section I.

	1953	1952	*Per cent. increase on 1952*	P in o
Patients on the books 1st January, 1953	1,707	1,399	22	
Add—new patients during 1953 ..	13,663	11,453	19	
Total patients nursed ..	15,370	12,852	20	
Deduct—patients taken off books during 1953	13,450	11,145	—	
Patients on the books 31st December, 1953	1,920	1,707	12	

Classification of nursing visits.

Medical	217,577
Surgical	45,940
Infectious diseases	4,758
Tuberculosis	23,708
Maternal complications	2,034
	294,017

The number of nursing visits shows an increase of 11 per cent. on 19 123 per cent. on 1948.

For the fifth consecutive year, the number of patients nursed and the n of visits paid have increased despite an almost static population. Th 1948 coincided with the introduction of the National Health Service an pertinent, therefore, to enquire to what extent the remarkable increase in nursing work is due simply to the introduction of the National Health S and to what extent other factors are responsible. The aged have for a lon

ed the majority of patients of the district nurse but, clearly, the gradual of the population cannot account for an almost threefold increase of s in five years. There are evidently other factors at work than an ageing tion.

doubtedly, the introduction of the National Health Service—" free to care to use it "—in virtue of that very principle has been responsible for r demand for home nursing, for the public now recognizes its right to vices of the district nurse. Again, because the district nursing service is " State " service the family doctor is making greater use of the district than formerly, which is a direct benefit for the patients. Much of the ed nursing work is, however, directly related to the hospitals. Patients be discharged from hospital earlier than was customary only five years d there is, in consequence, a greater call for skilled nursing at home ; condly, many aged sick are being nursed at home simply because there is itable hospital accommodation available for them.

her reasons for the rapid development of the service are to be found e the National Health Service as such. The changing face of medicine in st decade has had a profound influence on the technique of district g. More than half of all nursing visits today are for the purpose of giving ons of one kind or another, for example streptomycin, penicillin, and , so that many patients who formerly were hospital cases are now treated rsed in their own home. In five years the number of injections has more oubled. Again, whereas only a few years ago confinement to bed in ss and senility was a usual part of medical treatment, the modern tendency t the patient up at the earliest possible moment. This trend clearly must earlier discharge from hospital, to a bigger turnover, and therefore to omiciliary nursing . This practice is given added weight by the rediscovery therapeutic value of the home as compared with the hospital ward.

on II.

Classification of new cases.

	1953	Per cent.	1952	Per cent.	1951 Per cent.
Infectious diseases :					
(a) Influenza	103	0·8	96	0·8	1·1
(b) Primary pneumonia	556	4·1	405	3·5	3·2
(c) Broncho pneumonia	235	1·7	167	1·5	2·0
(d) Measles	16	0·1	23	0·2	0·3
(e) Whooping cough	13	0·1	16	0·1	0·1
(f) Pulmonary tuberculosis	537	4·0	300	2·6	2·1
(g) Non-pulmonary tuberculosis	40	0·3	42	0·4	0·4
(h) Erysipelas	20	0·2	23	0·2	0·1
(i) Other notifiable diseases	31	0·2	36	0·3	0·1
	1,551	11·5	1,108	9·5	9·5
) Diabetes	195	1·5	211	2·0	2·0
) Anaemias	273	2·0	199	1·5	1·5
) Bronchitis	1,346	10·0	954	8·0	6·0
) Other respiratory diseases	564	4·0	378	3·5	2·5
) Heart diseases	1,146	8·5	1,046	9·0	9·5
) Cancer	638	4·5	590	5·0	6·5
) Diseases of the circulatory system	352	2·5	405	3·5	4·0
) Diseases of the nervous system	127	1·0	106	1·0	1·5
) Uro-genital	111	1·0	149	1·5	2·0
) Complication of pregnancy	53	0·5	66	0·5	1·0
) Complication following childbirth	215	1·5	171	1·5	1·5
) Other medical cases	5,063	37·0	3,917	34·0	35·5
) Post-operative	576	4·0	579	5·0	4·5
) Varicose ulcers	155	1·0	115	1·0	1·5
) Other surgical	1,285	9·5	1,432	12·5	11·0
) Operations	13	—	27	—	—
Totals	13,663	100·0	11,453	100·0	100·0

Section III.

Age groups.

The 13,663 new cases were in the following age groups :—

Age group	1953	Per cent.	1952	Per cent.	1951 Per cent.	Pe
0—4	1,316	9·7	911	8·0	6·5	
5—14	1,051	7·7	838	7·3	5·1	
15—64	6,768	49·5	5,486	47·9	46·4	
65—74	2,492	18·2	2,380	20·8	22·6	
75 and over	2,036	14·9	1,838	16·0	19·4	
Totals	13,663	100·0	11.453	100·0	100·0	

The above figures of new cases, however, do not give a true analysis age groups of all patients nursed during the year, since there were also patients brought forward at the beginning of the year and many of these pa are elderly and have been under the nurse's care for a long time. At an time, approximately three-fifths of all patients nursed at home are aged 6 over. Of this proportion two-thirds are in the age group 65—74, and one in the age group 75 and over. Of the two-fifths of patients who are belo age of 65, approximately one-tenth are under the age of five.

Section IV. Sources of reference of new cases.

	1953	Per cent.	19 Per
General medical practitioners	12,535	91·8	8
Hospitals	809	5·9	
Health Department :			
Nursing Services Division	85		
Tuberculosis service	43	1·0	
School medical service	6		
Welfare Services Department	13		
Personal applications	154	1·3	
Others	18		
Totals	13,663	100·0	10

C. Training.

The Institution has three training homes for the training of State regi nurses in home nursing—at Ardwick, Harpurhey and Hulme. The n course of training is six months, but an abridged course of four mon permitted if the student holds certain midwifery or public health certifica has a certain amount of district nursing experience.

The training consists of supervised experience of domiciliary nu lectures, tutorials, demonstrations, and visits of observation. The le and visits of observation are included in a month's special block course is organised by the Institution not only for Manchester students but for stu in the East Lancashire region. During 1953, three such courses were hel 38 students attended from such centres as Salford, St. Helens, Rochdale, S port, Bury, Huddersfield, Blackburn and Lancashire County, in addition from Manchester.

The experimental course of instruction for State enrolled assistant n organised at the Bradford Home under the auspices of the Queen's Institu District Nursing has been continued during the year. The object of the c is to give elementary instruction in district nursing to assistant nurses, ar Bradford Home is one of two in the country which are experimenting wit instruction.

Transport.

31st December, 1953, 17 motor cars were in regular use " on the district " mpared with 19 cars and 2 auto-cycles in 1952. Of the cars, 9 were the rty of the Institution and 2 the property of the Corporation. The ning 6 cars were owned by the nurses and an allowance granted for their

e majority of the remaining 65 nurses use bicycles and a few either walk or ublic transport. A survey has shown that the provision of a motor car s a nurse who hitherto has used a bicycle or public transport to undertake average up to one-third additional nursing visits. The car has also the dvantage over all other forms of transport in that the car driver arrives patient's home dry and warm in all weathers, whereas in inclement r much time and energy is lost by the cyclist and walker in dealing with othing and in getting warm. It can be shown that, on the assumption car enables a nurse to undertake one-third additional visits, a car is not an sive luxury : rather it is a real substitute for unrecruitable nurses. The 953 was a year of shortage of nurses. Unfortunately it coincided with tantial increase in patients and nursing visits with the result that the visits rse increased from 3,600 to 4,250 whilst the case-load per nurse increased 1 to 25½. If ,in succeeding years, the shortage of district nurses continues, ovision of additional motor cars as a substitute for unrecruitable nurses ave to be contemplated.

ckroom equipment loans scheme.

is scheme, organised by the Institution with the co-operation of the British Cross Society and the Manchester University Settlement, makes available llowing articles for loans to patients, free—air rings ; bed bottles ; bed s ; bed pans ; bed rests ; bed tables ; feeding cups ; hot water bottles ; rs ; kidney bowls ; rubber sheets ; sputum mugs ; steam kettles ; g sticks ; bed linen (in emergency cases) and for a small weekly charge— ds ; crutches and water beds.

e district nursing centres loan out equipment only to persons being l by them. The Red Cross and the University Settlement issue equipment se patients and also to other persons in need provided that the application ported by a doctor, midwife, health visitor, or district nurse. Red Cross s are open at certain times of the day in Chorlton-on-Medlock, Crumpsall, ury, Newton Heath, Whalley Range, and Wythenshawe ; the Manchester rsity Settlement is in Every Street, Ancoats.

CONVALESCENCE.

e number of patients admitted to convalescent homes has increased by mpared with the previous year. The numbers are 186 in the year 1952 50 in 1953.

e following particulars indicate the number of patients admitted to each lescent home:—

West Hill Convalescent Home, Southport	186
Blackburn and District Convalescent Home, St. Annes ..	14
Lear Home of Recovery, West Kirby	11
Sydney House, Pensarn (mothers with children)	4
Sefton House, Birkenhead (children)	14
Jewish Blind Society's Homes..	6
British Red Cross Society, Binswood Rest Home, Manchester	13
" Boarbank Hall," Grange-over-Sands	2
Total	250

Recommendations for convalescence are received, mainly, from the pa medical attendants, but during the year several applications have been re from hospital almoners regarding patients being discharged from hosp attending out-patients' departments

In addition to the above, children are admitted to the Dr. Garrett Me Home, Conway, North Wales, which is administered by the Health Com

Details relating to these cases and other information regarding Dr. (Memorial Home are given elsewhere in this report.

HOME HELP SERVICE.

The total establishment of Home Helps was 60 full-time female emp working a 44-hour week and holding superannuable appointments. This is the same as in the previous year.

The number of full-time permanent Helps employed at 1st January, was 60 and during the year 12 were recruited and 10 resigned from the s The average number of permanent Helps employed was 58.

The number of part-time Helps recruited was 5 and the number res during the year was also 5. A total of 5 temporary full-time Helps join service and 6 resigned.

In addition to the 60 permanent Helps employed at 31st December, there was 1 temporary full-time Help and there were also 6 part-time working in the service as reliefs for those permanent Helps not on duty result of illness or holidays.

The average number of full-time Helps absent from duty as the res illness was 7 each week and of part-time Helps 1 each week. This fairl rate of sickness may be explained by the fact that in many cases the Hel engaged in heavy, dirty and difficult work which may lower their resista sickness.

The average length of time spent on each case by each Home Help weeks, but frequently assistance has to be given over longer periods whe need exists.

The demands upon the service have multiplied as it has become increa well known, but as no increase in the number of Helps employed has place, the demand has had to be met by providing a greater amount of par help. This means that the majority of the full-time Helps are engaged two or three cases of sickness, old age and infirmity each week. Confin cases are always provided with full-time assistance as part-time help is inad on these occasions.

During the year, applications for assistance were received from 1,482 l holds; 398 of these were in cases following confinement and the rem 1,084 were cases of sickness, old age and infirmity. Outstanding applic from 1952 numbered 85 confinement cases and 20 sickness cases, totallin

ne sources of application for assistance in 1953 were as follows:—

Source	Number in cases following confinement		Number in cases of sickness, old age, etc.		Totals	
l application (by letter, tele-ne, or visit to the office by icant or a representative) ..	255	(322)	576	(578)	831	(900)
welfare centres, health visitors, idwives	129	(154)	132	(96)	261	(250)
l almoners	12	(16)	170	(132)	182	(148)
l practitioners	2	(4)	116	(73)	118	(77)
ulosis Centre	—	(—)	18	(20)	18	(20)
Nursing Institution	—	(—)	19	(15)	19	(15)
e Services Department	—	(—)	16	(15)	16	(15)
al Assistance Board	—	(—)	16	(8)	16	(8)
Aid Society	—	(—)	6	(—)	6	(—)
Health Section	—	(—)	4	(—)	4	(—)
l of Social Service	—	(—)	11	(—)	11	(—)
Totals	398	(496)	1,084	(937)	1,482	(1,433)

(The figures in parentheses relate to 1st January, 1952, to 31st December, 1952.)

f the 1,482 applications for help, 208 for confinement and 308 for sickness were cancelled by the persons concerned, and in 256 cases no actual request elp materialised after the application had been made.

ne number of households assisted during the year was 769, of which 166 in households where a confinement had occurred and 603 where there cases of sickness, old age or infirmity. Of the latter number, 249 cases assisted on more than one occasion and 354 cases were assisted on one ion only, so that the number of such cases assisted over the year totalled , making a grand total of 1,341 occasions where help was provided in cases nfinement, old age and infirmity and sickness.

ull-time help was given in cases of sickness and old age on 102 occasions art-time assistance on 1,073 occasions. At the close of 1953, 42 confinement and 4 sickness cases were registered as requiring attention during 1954.

ontributions towards the cost of the service are recovered from house-rs and such contributions, up to 31st December, 1953, have been assessed ding to authorised scales of assessment which are based on the recom-lations made by the Association of Municipal Corporations.

n 1st January, 1954, new scales of assessment bearing a closer relationship e present cost-of-living index than those previously in operation, came force.

o-ordination of the service is effected by the Organizer, who visits the s of persons requesting assistance and supervises the work of Home s.

The Organizer uses her own car for transport purposes and is paid a allowance.

The following table indicates the distribution of cases where he provided in 1953 throughout the various districts of the City, and a number of Home Helps residing in those districts :—

Districts	Type of case assisted				Total		Distribut full-time p and tempor at 31st De 195	
	(a) Following confinement		(b) Sick and aged persons					
Wythenshawe, i.e., Northenden, Benchill, Sharston, Crossacres, Royal Oak, Baguley, Newall Green, Woodhouse Park and Northern Moor	43	(50)	179	(200)	222	(250)	13	(13)
Didsbury, Fallowfield and Withington ..	31	(22)	144	(105)	175	(127)	8	(10)
Blackley, Moston and New Moston, and Heaton Park	15	(21)	104	(147)	119	(168)	10	(9)
Ardwick, Abbey Hey and Gorton	9	(9)	106	(101)	115	(110)	5	(6)
Burnage, Longsight and Levenshulme ..	18	(16)	157	(95)	175	(111)	8	(5)
Chorlton-cum-Hardy and Whalley Range..	15	(22)	80	(59)	95	(81)	—	(3)
Moss Side and Rusholme	12	(15)	85	(76)	97	(91)	7	(6)
Chorlton-on-Medlock and Hulme	9	(6)	54	(43)	63	(49)	5	(2)
Crumpsall	2	(4)	25	(29)	27	(33)	—	(1)
Bradford, Openshaw and Clayton	4	(5)	83	(63)	87	(68)	3	(3)
Newton Heath and Miles Platting	1	(2)	70	(39)	71	(41)	1	(1)
Cheetham	5	(4)	38	(34)	43	(38)	—	(1)
Collyhurst, Harpurhey, Ancoats, and Beswick	2	(1)	50	(33)	52	(34)	—	(—)
Totals	166	(177)	1,175	(1,024)	1,341	(1,201)	60	(60)

NOTE.—Figures in parentheses relate to the previous year, 1952, and are included for comparison.

Types of cases assisted.

Confinement cases		166
Sickness cases { full-time 102 / part-time 1,073 }		1,175
Total		1,341

The figure of 1,175 may be sub-divided as follows:—

530 cases attended where the householders were too infirm on ac of age to be able to care for themselves.

645 cases attended where the householders were unable to ca themselves or their families on account of illness or accide

Comparison between types of cases attended in 1951, 1952 and 19

	1953	1952	1951
Confinement cases	166	177	252
Sickness cases	1,175	1,024	747
Total	1,341	1,201	999

FAMILY WELFARE SERVICE.

ıe Family Welfare centres have continued their activities along the lines hich they were designed. They evidently fulfil an important public e, as the level both of attendance and new cases shows no falling off. l the work is not only maintained but is increasing slowly. This shows hing which seems worth pointing out, namely, that the Family Welfare e did not meet a purely temporary need of the population in the early war period, but responded to a deeper and more permanent need to help with personal and family problems beyond their competence to solve ıemselves as the following figures indicate:—

	Interviews.	Number of persons attending.	New cases.
1953	1,277	351	266
1952	1,261	335	240
1951	1,135	301	217

o the unitiated the increase may not seem impressive, but it should be mbered that each case represents personal suffering of greater or less cy, and that much time is needed to understand the situation and to give ructive encouragement and advice. The time factor is a prominent e of the work, as the applicants must not feel rushed in putting forward troubles. For this reason sessions are prolonged far beyond the official of closing, especially the Monday evening session at Ardwick, 6—8 p.m., seldom ends before 9-30 p.m. and often later still.

s reported last year, the Service is working almost to capacity, and no acular growth can be expected, but it is satisfactory to note that, compared the work in 1951, there is a definite expansion.

ıree centres are functioning—at Higher Ardwick on Monday evenings, orthenden on Wednesday afternoons, and at Withington on Thursday ıoons. At the afternoon sessions the full medical staff does not attend. work is entirely voluntary. The figures for these centres are as follows:—

Higher Ardwick centre.	Interviews.	New cases.
1951	716	153
1952	721	142
1953	717	140
Northenden centre.		
1951	287	37
1952	339	66
1953	335	78
Withington centre.		
1951	132	27
1952	201	32
1953	225	48

he weekly attendance at all the centres is subject to great variation, being ed by the weather, holiday periods, etc. The largest attendance in one was 39 applicants ; frequently, there are attendances of 30 or more.

The number of interviews given to any one person in a year has a range depending on the need of the applicant. Some require advice con over a period to enable them to carry on and, in some few cases, to hospitalization. On the other hand many cases come only once or twice. particularly applies to the second partner in a marriage problem whe first partner makes the original appeal for help, and the second one is quently invited to attend. During the year 62 couples were co-operat solving their difficulties this way. If they come together on the first oc they are each interviewed by a separate doctor. Later both doctors confe the couple, and much light is shown on the problem in this way. It is possible to continue to help these couples over the period required fo readjustment by transferring the wife to one of the afternoon sessions releasing the time available at the evening sessions for workers who c attend during the day.

Of the total of 351 persons attending, 117 were men, most of come to the evening session at Ardwick. About 50 per cent. of these m into the group of higher skilled manual workers, foremen, shop mar clerks and schoolmasters. The other 50 per cent. are semi-skilled and uns workers.

The unmarried women are largely shorthand typists, school teache others of quite good general education. Many of the married women had similar occupations, but of course persons of other grades of intell and education attend.

An analysis of the problems about which the applicants come fal groups similar to those referred to last year, as follows:—

Classification of problems.

Marital disharmony	158
Maladjustment	56
Difficulties with children	47
Neurotic symptoms, depression, anxiety showing as fears, etc.	44
Borderland insanity or deluded	23
Unclassifiable, e.g. housing, etc.	23
	351

Analysis of age groups.

Under 20	20
Between 21 and 30	119
Between 31 and 40	121
Between 41 and 50	76
Over 51	4
Not ascertainable	11
	351

These age groups are significant as showing the correlation of prob with development of family life. The high percentage between the ag 20 and 40 seems to point to the problems of the early years of marriage children arrive, and later while they are still at home.

The sources of referals show an encouraging development and expansion:—

Marriage Guidance Council	49
Maternity and child welfare centres and health visitors	40
Self referred	39
Doctors	37
Probation officers	36
Family Welfare staff	36
Almoners	21
Child guidance clinic	18
Social workers	18
Through other applicants	14
P.S.W. Denton Rehabilitation Centre	13
Manchester Royal Infirmary	13
Clergy, Poor Man's Lawyer, Citizens' Advice Bureau, etc.	17
	351

The friendly relationship with the Marriage Guidance Council continues. meeting was officially arranged by the Medical Officer of Health between the arriage Guidance Council and representatives of the Family Welfare Service, d it was clearly shown that there is no duplication of functions in their spective functions, but that both organisations are supplying help to the mmunity in their individual ways.

It is also encouraging to note the growing co-operation between the Service d that of the Maternity and Child Welfare service through the health itors. The number of doctors who refer cases is increasing and almoners hospitals have also become aware of the Service and sent 21 cases last year.

Doctors and those concerned with the welfare of the general community other cities continue to be interested in this work. Recently special encouragent has been given by a request from the Medical Officer of Health for istol that his Assistant Medical Officer of Health should visit the Manchester ntres and see the methods used. This is taken to be a sign that the service s not only a local appeal amongst the citizens of Manchester, but is being ognised as important elsewhere.

VENEREAL DISEASES.

Treatment of mothers and children for venereal diseases has been continued two maternity and child welfare centres. The number of sessions has been duced to one at each centre since it was found that facilities were available ewhere through the National Health Service and attendances at the centres d become smaller due to that cause.

Particulars concerning attendances, new patients, and treatment are shown the accompanying table which is in the form required in Ministry of Health urns.

Health visitors follow up defaulters from any clinic when requested and en necessary repeated visits are paid, including evening visits, and every ort is made to secure attendances for treatment.

Contact tracing continues to present difficulties owing to inadequate ormation given, but whenever possible all contacts referred to the Departnt are persuaded to attend a clinic.

The following table shows particulars of the work done during the year:-

	Syphilis		Gonorrhoea		*Other Conditions		Tot	
	M.	F.	M.	F.	M.	F.	M.	F
1. Number of patients on 1st January under treatment or observation	7	88	—	—	25	57	32	1
2. Number of patients removed from the register during any previous year which returned during the year under report for treatment or observation of the same condition	—	5	—	—	—	—	—	
3. Number of patients dealt with for the first time during the year under report (exclusive of those under Item 4) suffering from :—								
(a) Syphilis, primary	—	—	—	—	—	—	—	–
(b) ,, secondary	—	—	—	—	—	—	—	–
(c) ,, latent in 1st year of infection †	—	—	—	—	—	—	—	–
(d) ,, cardio-vascular*	—	—	—	—	—	—	—	–
(e) ,, of the nervous system*	—	—	—	—	—	—	—	–
(f) ,, all other late or latent stages*	—	12	—	—	—	—	—	
(g) ,, congenital (under 1 year)	—	—	—	—	—	—	—	–
(h) ,, ,, (over 1 year)	—	2	—	—	—	—	—	
(i) Gonorrhoea	—	—	—	3	—	—	—	
Other conditions (j) Chancroid	—	—	—	—	—	—	—	–
Other conditions (k) Lymphogranuloma venereum (Syn. Lymphogranuloma inguinale)	—	—	—	—	—	—	—	–
Other conditions (l) Granuloma inguinale (Syn. Granuloma venereum)	—	—	—	—	—	—	—	–
Other conditions (m) Non-gonococcal urethritis (males only)	—	—	—	—	—	—	—	–
Other conditions (n) Any other conditions requiring treatment	—	—	—	—	1	74	1	
Other conditions (o) Conditions not requiring treatment	—	—	—	—	92	204	92	20
Other conditions (p) Conditions remaining undiagnosed at 31st December	—	—	—	—	—	—	—	–
4. Number of patients dealt with for the first time who have been transferred from other Centres (civil or Service) or from practitioners approved under Ministry of Health Circular 2226	—	1	—	—	—	—	—	
Totals of Items 1, 2, 3 and 4	7	108	—	3	118	335	125	44
5. Number of patients suffering from syphilis and gonorrhoea discharged after completion of treatment and the final tests of cure, or who were diagnosed as "other conditions"	3	24	—	—	106	301	109	32
6. Number of patients suffering from :—								
(a) Syphilis who defaulted after completion of treatment, but before final discharge	—	14	—	—	—	—	—	1
(b) Gonorrhoea who defaulted before 3 months	—	—	—	—	—	—	—	—
(c) Gonorrhoea who defaulted after 3 months	—	—	—	1	—	—	—	
7. Number of patients who ceased to attend before completion of treatment and were suffering from :—								
(a) Acquired syphilis of less than 1 year's duration	—	—	—	—	—	—	—	—
(b) Acquired syphilis of more than 1 year's duration	—	16	—	—	—	—	—	1
(c) Congenital syphilis (under 1 year)	—	—	—	—	—	—	—	—
(d) ,, ,, (over 1 year)	1	—	—	—	—	—	1	—
(e) Gonorrhoea	—	—	—	—	—	—	—	—
8. Number of patients under treatment or observation *known* to have died :—								
(a) From syphilis	—	—	—	—	—	—	—	—
(b) From treatment	—	—	—	—	—	—	—	—
(c) From other causes	—	—	—	—	—	—	—	—
9. Number of patients transferred to other Centres or Institutions or to private practitioners	1	3	—	—	—	—	1	
10. Number of patients remaining under treatment or observation on 31st December	2	51	—	2	12	34	14	8
Totals of Items 5, 6, 7, 8, 9, and 10 (These totals should agree with those of Items 1, 2, 3, and 4).	7	108	—	3	118	335	125	44
1'. Number of patients included in Item 7 who failed to complete one course of treatment of either penicillin or of arsenic and bismuth and were suffering from :—								
(a) Acquired syphilis of less than 1 year's duration	—	—	—	—	—	—	—	—
(b) Acquired syphilis of more than 1 year's duration	—	3	—	—	—	—	—	
(c) Congenital syphilis of less than 1 year's duration	—	—	—	—	—	—	—	—
(d) Congenital syphilis of more than 1 year's duration	—	—	—	—	—	—	—	—

	Syphilis		Gonorrhoea		Other Conditions		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	Totals
er of attendances :—									
(*a*) for individual attention by the physician	28	910	—	11	166	799	194	1,720	1,914
(*b*) for intermediate treatment, e.g., dressings, etc.	—	—	—	—	—	—	—	—	—
tendances	28	910	—	11	166	799	194	1,720	1,914

	Under 1 year		1 and under 5 years		5 and under 15 years		15 years and over		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
r of patients suffering from ital syphilis in Item 3 above d according to age	—	—	—	—	—	—	—	1	—	1

	Microscopical		Cultural	Serum		†† Cerebro-spinal fluid	Others
	for Syphilis	for Gonorr-hoea		for Syphilis	for Gonorr-hoea		
gical work :—							
Number of specimens examined at, and by the physician of, the Treatment Centre	—	—	—	—	—	—	—
Number of specimens from patients at the Treatment Centre sent to a pathological laboratory	—	406	—	683	24	—	—

	Syphilis (less than 1 year)		Syphilis (more than 1 year)		Gonorrhoea		Other Conditions	
	M.	F.	M.	F.	M.	F.	M.	F.
s attending for examination through ency of :—								
Patients	—	—	—	—	—	—	—	—
Health visitor or Social Service worker..	—	—	—	—	—	—	—	—
Totals..	—	—	—	—	—	—	—	—

rder to avoid duplication, patients with cardio-vascular syphilis who are also suffering from syphilis of the nervous her systems should be recorded as suffering from cardio-vascular syphilis alone.

yphilis, latent in first year of infection," applies to cases presenting no clinical sign of syphilis but considered (e.g. eversal of positive blood findings after treatment) to have contracted this disease within the preceding 12 months.

e number of diagnostic lumbar punctures should be given, not the number of tests carried out.

ry Services Division

INTRODUCTION
WATER SUPPLY
FOOD SUPPLY:
- Hygiene
- Milk and ice cream control
- Adulteration
- Meat (Markets Department)

SMOKE ABATEMENT:
- Industrial
- Smokeless areas
- Recording of atmospheric pollution

HOUSING CONDITIONS:
- Disrepair
- Post-war Clearance Areas
- Pre-war Clearance Areas
- Individually unfit houses
- Re-housing: medical circumstances
- Abatement of overcrowding
- Houses let-in-lodgings
- Common lodging-houses
- Caravan dwellings
- Canal boats

OCCUPATIONAL CONDITIONS:
- Factories
- Factory outworkers
- Shops and employment of young persons

GENERAL SANITARY CONDITIONS
- Infectious diseases and food poisoning
- Rodent control
- Eradication of insect pests
- Drainage works (Defects and repairs)
- Sanitary accommodation
- Tipping of refuse
- Offensive trades
- Effluvium nuisances
- Noise
- Land used for pleasure fairs
- Rag flock and other filling materials
- Export of washed rags and second hand clothing
- Exchange of toys for rags
- Swimming baths
- Establishments for massage or special treatment
- Hairdressers and barbers
- Sale of certain poisons
- Public mortuaries
- Exhumations

PUBLIC CONVENIENCES
PUBLIC ANALYST

SANITARY SERVICES DIVISION.

J. Graham, F.S.I.A., M.R.S.I., Chief Sanitary Inspector.

ıe work of this division of the Department, being concerned with the mentals of "environmental sanitation," defined by the World Health ıisation to mean "the control of all those factors in man's physical ɔnment which exercise or may exercise a deleterious effect on his physical ɔpment, health and survival," is particularly directed to the basic ɛements of clean water, air, food, housing and general sanitary circum-ɛs.

ıe interdependence of these factors was recognised in the reorganisation Department, in 1952, with the merging of the sections which prior to that ıad separately dealt with housing survey, milk control and rodent infes-s respectively. The co-ordination of those activities within the one ıry Services Division has proceeded effectively.

nfortunately, the pressing problem of deficiencies in the number of district ry inspectors (at the end of the year there was a deficiency of 32 per cent. likelihood of the rate increasing) with a most embarrassing turnover of has continued to be a serious handicap to the efficient performance of ɔry duties. Accordingly, with a view to remedying the situation, ɛntations made by the Committee on the salaries of sanitary inspectors under consideration by the Establishment Committee at the end of the

ıe whole subject of the recruitment, training and qualifications of sanitary tors in England and Wales was reported upon during the year by a ing Party set up by the Minister of Health under the chairmanship of hn Maude, K.C.B., K.B.E. The investigation produced a most compre-ve document forming the first authoritative survey of the training for and uties of sanitary inspectors and provided a wealth of factual data and lered conclusions on changes deemed necessary. In general, the usions of the report are in full accord with the experience of the Sanitary es Division in Manchester and implementation of its terms by the ter of Health and other authorities concerned would be to the ultimate t of all Sanitary Authorities.

August, Mr. J. Lawson, who had held the office of Chief Sanitary tor for 7 years, retired after 29 years service as a sanitary inspector in epartment. His period of service as the Chief Inspector was one of effort under the exceptionally difficult circumstances of the post-war It was especially concerned with new local act powers dealing with the ishment of the "central smokeless area," the operation of prior approval ation to boiler plant and the registration of food hawkers, which form orthy examples of legislation initially of local application only, becoming ised to be of national significance and value.

r. G. P. Tanner, district sanitary inspector, was awarded fellowship of the ry Inspectors' Association for his thesis on "Delicatessen Food," whilst er inspector, Mr. C. Arran, secured the Keeley Prize, awarded annually en competition held by that Association for the best paper on some of general sanitary administration. His paper dealt with "The case ɔcal Legislation."

Inspections and visits.

Water.

To obtain samples of water for chemical and bacteriological examination

Food Supply.

Restaurants and snack bars
Factory canteens
Bakehouses
Food preparation premises
Markets re sale of food
Shops re sale of food
Hotels, beerhouses
Food poisoning
Hawkers of food and storage premises
To obtain samples of food and drugs
To farms taking "Appeal to Cow" samples
To registered premises of wholesale margarine dealers
Farms
Dairies
Pasteurising and sterilising premises
Hospitals, schools and day nurseries
Shops selling bottled milk,
Synthetic cream premises
Premises used for the manufacture of ice cream
Premises used for the sale of ice cream

Smoke abatement.

Works, etc.

Housing conditions.

Primary inspections of dwelling houses under the Public Health Act, 1936
Subsequent inspections of dwelling houses under the Public Health Act, 1936
Primary inspections of dwelling houses under the Housing Act, 1936
Subsequent inspections of dwelling houses under the Housing Act, 1936
Overcrowding
Re-housing visits and medical cases
Houses-let-in-lodgings
Common lodging houses
Caravan dwellings
Canal boats
Supervision of default works

Occupational conditions.

Homes of outworkers
Factories
Shops re Shops Act
Other business premises

neral sanitary conditions.

Primary inspections of infected houses	1810
Subsequent inspections of infected houses	170
Contacts—infectious disease	747
Hospitals, institutions, nursing homes and agencies	82
Rat infestation	16275
Refuse tips	105
Verminous premises	71
Offensive trades	125
Effluvium nuisances	793
Noise	294
Rag flock and other filling materials	363
Export of washed rags and second-hand clothing	47
Swimming baths	41
Establishments for massage or special treatment	108
Hairdressers and barbers shops—Manchester Corporation Act, 1950	331
Sale of certain poisons—Pharmacy and Poisons Act, 1933	590
Exhumations	48
Infirm persons	64
Cinemas, theatres, dance and billiard halls	119
Land used by pleasure fairs	70
Premises for the purpose of examination of drains	324
Rag and bone dealers barrows	6
Land, refuse deposits, etc.	874
Water courses	39
Streets, passages, roadways and footpaths	1435
Railway stations	38
Stables	82
Piggeries	109
Steam disinfectors	7
Sanitary accommodation, etc., at schools	104
Sanitary accommodation, etc., at parks	122
Public sanitary conveniences	275
Miscellaneous	23012

WATER SUPPLY.

Water for the City is obtained, mainly, from Thirlmere and Hawe in the Lake District, augmented by a further supply of approximately 20 gallons each day obtained from the Longdendale Valley reservoirs, 18 miles east of Manchester.

Distribution is effected from service reservoirs and by trunk mains, b being used to maintain the pressure in the high level districts. The reservoirs are at Prestwich, Heaton Park, Audenshaw, Godley, Denton, and Bowdon.

Samples of the water were obtained as a routine measure or fo complaints at dwelling-houses, hospitals, dairies, factories or business p and submitted for bacteriological and chemical examinations. A tota bacteriological and 65 chemical samples were obtained, and 35 com were investigated. Unsatisfactory conditions were found in 18 of the s The following table summarises the bacteriological results of the 66 s examined:—

District	No. of samples	Samples free from coliform bacteria	Faecal coli found		Non-faecal coli found		Service reservoir or aqueduct	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.		
Ardwick	2	2	—	—	—	—	Audenshaw	L
Baguley	1	—	—	—	1	1	Thirlmere aqueduct	
Beswick	1	1	—	—	—	—	Godley	L
Blackley	6	6	—	—	—	—	Heaton Park	
Bradford	2	—	—	—	2	1: 1	Audenshaw	L
Burnage	2	2	—	—	—	—	Audenshaw	L
Cheetham	3	3	—	—	—	—	Prestwich	
Chorlton-cum-Hardy	1	1	—	—	—	—	Audenshaw	L
Chorlton-on-Medlock	3	2	—	—	1	5	Audenshaw	L
Crumpsall	4	4	—	—	—	—	Heaton Park	
Didsbury	3	3	—	—	—	—	Audenshaw	L
*Fallowfield	2	1	1	1	1	1	Audenshaw	L
Gorton	1	1	—	—	—	—	Audenshaw	L
Harpurhey	2	2	—	—	—	—	Heaton Park	
*Hulme	1	—	1	1	1	4	Audenshaw	L
Levenshulme	1	1	—	—	—	—	Audenshaw	L
Longsight	1	1	—	—	—	—	Audenshaw	L
Miles Platting	3	3	—	—	—	—	Godley	L
Moss Side	1	1	—	—	—	—	Audenshaw	L
*Moston	5	2	1	2	3	1: 1: 50	Heaton Park	
Newton Heath	4	4	—	—	—	—	Godley	L
Northenden	2	2	—	—	—	—	Thirlmere aqueduct	
Openshaw	1	1	—	—	—	—	Godley	L
*Whalley Range	3	2	1	25	1	50	Audenshaw	L
Withington	11	3	—	—	8	4 (1) 2 (17) 2 (25)	Audenshaw	L

NOTE.—*One sample contained both faecal and non-faecal coli.

he Engineer and Manager of the Waterworks Department was informed e results of all the samples reported to be unsatisfactory and, in each of cases, further samples were obtained. All the follow-up samples were l to be satisfactory.

he water supply from an artesian well at a works in Didsbury was examined ound to be satisfactory.

riodic reports on the condition of Manchester's water supply were rded by the Engineer and Manager of the Waterworks Department to the cal Officer of Health.

he Engineer and Manager of the Waterworks Department has supplied llowing information in connection with Manchester's water supply:—

The water supply has been satisfactory both in quality and quantity.

Regular samples are taken for bacteriological examination of the raw water and of he treated water going into supply. Of the 624 samples examined, 542 were found to be ee from bacteria. Typical chemical analyses of the sources of supply are given later in his report.

The Thirlmere and Longdendale supplies are treated with hydrated lime. This has roved effective in limiting the maximum lead content found in samples given overnight ntact with lead service pipes to less than 0·2 parts per million.

It has proved impracticable to prevent access of seagulls to the larger service reservoirs. llution from this source is dealt with by chlorination at the outlets of the reservoirs.

The number of dwelling-houses supplied is 209,819 and the estimated population 701,800. All dwelling-houses are supplied from water mains.

TYPICAL ANALYSES.

) Thirlmere and Haweswater Lakes.

The supply from these lakes is subject only to slight variation and the following are pical analyses:—

	Thirlmere	*Haweswater*
pH value	6·0	6·6
Colour p.p.m. platinum	12	7
Turbidity p.p.m.	2·5	0·8
	Parts per million	
Total solids dried at 180°C.	30	36
Free acidity as CO_2	4	1
Alkalinity as $CaCO_3$	5	10
Total hardness as $CaCO_3$	11	17
Chlorides as Cl_2	7	5
Nitrates as N_2	0·17	0·15
Ammoniacal nitrogen as N_2	0·02	0·02
Albuminoid nitrogen as N_2	0·03	0·05
Oxygen absorbed test, 4 hours at 27°C.	0·78	0·72
Silica as SiO_2	2·5	2
Iron as Fe	0·06	0·05
Manganese as Mn	nil	nil

Thirlmere Supply. *As taken from house taps.*

Date	April 8th	October 14th
Lab. no.	3906	4079
pH value	7·1	6·9
Colour as p.p.m. platinum	9	13
Turbidity p.p.m.	1·8	1·6
Odour: Cold	nil	nil
Hot	faint earthy	nil
Taste: Cold or hot	nil	nil

	Parts per millio
Total solids dried at 180°C.	40
Free acidity as CO_2	1·5
Alkalinity as $CaCO_3$	14
Total hardness as $CaCO_3$	19
Chlorides as Cl_2	8·5
Nitrates as N_2	0·16
Nitrites as N_2	nil
Ammoniacal nitrogen as N_2	nil
Albuminoid nitrogen as N_2	0·02
Oxygen absorbed test, 4 hours at 27°C.	0·54
Silica as SiO_2	2
Iron as Fe	0·11
Manganese as Mn	nil

(3) Longdendale Aqueduct Supply. *Raw water.*

This supply is subject to wide fluctuations during the year as indicated by th results:—

pH value	4·0	to	6·3
Colour as p.p.m. platinum	17	to	66
Turbidity as p.p.m.	3	to	16
	Parts per million		
Total solids dried at 180°C.	60	to	75
Free acidity as CO_2	4	to	10
Alkalinity as $CaCO$	nil	to	8
Total hardness as $CaCO_3$	24	to	32
Chlorides as Cl_2	8	to	10
Nitrates as N_2	0·40	to	0·(
Ammoniacal nitrogen as N_2	0·02	to	0·(
Albuminoid nitrogen as N_2	0·05	to	0·(
Oxygen absorbed test, 4 hours at 27°C.	0·95	to	3·14
Silica as SiO_2	6	to	10
Iron as Fe	0·18	to	0·5
Manganese as Mn	0·08	to	0·1

(4) Longdendale Aqueduct Water Supply. *Taken as leaving Godley Reserve*

Date	April 21st	Nove
Lab. no.	3914	412
pH value	7·7	7··
Colour as p.p.m. platinum	25	56
Turbidity p.p.m.	10·5	9·
Odour. Cold	nil	nil
Hot	faint earthy	faint
Taste. Cold	nil	nil
Hot	faint earthy	nil
	Parts per millio	
Total solids dried at 180°C.	92	80
Free acidity as CO_2	1·5	1·
Free alkalinity as $CaCO_3$	nil	nil
Total alkalinity as $CaCO_3$	16	10
Total hardness as $CaCO_3$	40	34
Chlorides as Cl_2	11	8
Nitrates as N_2	0·41	0·
Nitrites as N_2	nil	nil
Ammoniacal nitrogen as N_2	0·24	0·
Albuminoid nitrogen as N_2	0·06	0·
Oxygen absorbed test, 4 hours at 27°C.	1·36	3·
Silica as SiO_2	8	7
Iron as Fe	0·18	0·
Manganese as Mn	0·17	0·

Note.—This supply is sterilised by the chloramine process, which acco bulk of the ammoniacal nitrogen present. Traces of nitrites, when derived from this treatment, also.

PLUMBO-SOLVENCY.

THIRLMERE SUPPLY.

The untreated water has a fairly low plumbo-solvent action, but the water is neutralised with hydrated lime at the head works to raise the pH value of the distributed supply to 7·0 to 7·5. Plumbo-solvency tests have not been carried out this year, but past records indicate that lead content in water which has stood in contact with lead service pipes overnight is definitely less than 0·2 p.p.m. as Pb.

LONGDENDALE SUPPLY.

The untreated water has a marked plumbo-solvent action. It is treated with hydrated lime to raise pH value on distribution to 7·0 or over. Plumbo-solvency tests have not been carried out this year, but past records show that water which has stood in contact with lead service pipes overnight has a lead content not exceeding 0.2 p.p.m. as Pb.

BACTERIOLOGICAL REPORT.

AQUEDUCTS AND SERVICE RESERVOIRS.

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Aqueducts						
lmere	3	3	0	—	0	—
gdendale..	50	9	36	1–600	33	1–250
Service Reservoirs						
enshaw No. 1 ..	22	1	17	1–900	17	1–900
,, No. 2 ..	22	2	17	1–1800+	16	1–900
,, No. 3 ..	21	2	17	1–1800+	16	1–350
ton No. 1	14	6	5	1–8	7	1–5
No. 2	13	8	4	1–25	5	1–35
ley inlet	50	45	1	1	5	1–8
, outlet	51	42	3	1–2	7	1–13
ton Park	25	1	24	1–600	18	1–600
twich No. 1 ..	26	21	3	1	4	1–13

Water from Haweswater and Thirlmere lakes is chlorinated in the aqueducts near the headworks. It is re-chlorinated before it enters the Manchester area of supply. Results for the supply distributed direct from the Thirlmere aqueduct are given in the next table.

The Longdendale aqueduct results given above are prior to chlorination. The water is chlorinated before it enters the Godley reservoir and sufficient chlorine (as chloramine) is added to maintain a chlorine residual in the water leaving the reservoir.

Godley outlet represents the water entering the distribution system. Of the 3 samples containing faecal coli, only 1 contained 2 coli per 100 mls., and the 3 samples were well separated in time. The 7 samples with non-faecal coli were as follows:—

4 samples with only 1 non-faecal coli per 100 mls.

3 samples with 3, 5 and 13 coli (non-faecal) respectively.

Samples with 13 and 5 coli were collected within 2 days of each other, and repeat was free.

The very high coli counts in Audenshaw and Heaton Park reservoirs are due to contamination arising from gulls.

BACTERIOLOGICAL REPORT.

CHLORINATED WATER SUPPLIES ON DISTRIBUTION.

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
enshaw	131	108	8	1–3 *a*	22	1–50 *a*
ton	66	61	0	—	5	1–3
ley	84	76	0	—	8	1–5 *b*
ton Park	118	90	12	1–450 *c*	26	1–450 *c*
twich	89	74	0	—	15	1–170 *d*
lmere aqueduct ..	136	133	0	—	3	1–8 *e*
Total	624	542	20	—	79	—

NOTES:—

(*a*) Disturbed mains conditions in certain areas under waste detection, etc., the first two weeks in July caused 4 samples to contain 1, 2, 2 and 8 no coli per 100 mls. These were taken on four separate days and other taken on the same days were free from coli. 14 samples taken in this were free from coli.

General flushing of mains has not been carried out for a number in order to conserve water. Flushing was re-commenced about the end of and this caused a marked deterioration in the bacteriological quality water in the disturbed areas, due to coliform bacteria derived from growths " in deposits in the mains being transferred to the distribute Such coli are not derived from any pollution entering the mains. C residuals normally carried in the water are insufficient to kill the coli tra to the water issuing from the taps under such disturbed conditions. It be pointed out that it is impossible to maintain such an amount of chlorine in the water supply as will ensure that these deposits which varying amounts of organic matter, are sterile, or to prevent these growths "; if that were attempted, there would be a general outcry public regarding chlorinous odours and tastes.

The effect of flushing was apparent during the month of Septemb 13 samples out of 24 taken contained coliform bacteria essentially nc types. The results were as follows:—

Faecal coli present. 7 samples.
2 samples with 1 coli per 100 mls.
2 ,, ,, 2 ,, ,, ,, ,,
3 ,, ,, 3 ,, ,, ,, ,,
Non-faecal coli present. 13 samples.
5 samples with 1 coli per 100 mls.
2 ,, ,, 2 ,, ,, ,, ,,
2 ,, ,, 3 ,, ,, ,, ,,
1 sample ,, 12 ,, ,, ,, ,,
2 samples ,, 25 ,, ,, ,, ,,
1 sample ,, 50 ,, ,, ,, ,,

The 11 samples free from coli in this month were collected from und areas on the same days as the above samples were taken, indicating general supply was bacteriologically excellent.

To assist in maintaining the bacteriological quality of the wate desired standard, the chlorine dose was increased to 0·6 p.p.m. from th of July to the end of the year. Previously it was 0·4 p.p.m.

October, November and December samples were almost back to of 29 samples, 5 showed coli, as follows:—
1 sample showed 1 faecal coli per 100 mls.
3 samples ,, 1 non-faecal coli per 100 mls.
1 sample ,, 3 ,, ,, ,, ,, ,

(*b*) This supply is only slightly affected by " aftergrowths.". Six of the 8 with coli were collected during the warm period of July and August. found, *all non-faecal types*, were as follows :—
5 samples with 1 coli per 100 mls.
2 ,, ,, 2 ,, ,, ,, ,,
1 sample ,, 5 ,, ,, ,, ,,
The sample with 5 coli was taken on the same day as 2 other sampl were free from coli.

(*c*) About half the samples on this supply have been taken at a booster stati to consumption. This sampling point is 1 mile from the chlorine plant contact time with chloramine between treatment and sampling is Chlorine dose is 0·3 to 0·4 p.p.m. and residual chlorine at this sampli is generally 0·10 to 0·25 p.p.m. depending upon treatment and tempe water.

Out of 55 samples collected at this point, 4 gave high faecal col despite the presence of 0·10 to 0·15 p.p.m. residual chlorine. These follows:—

Jan. 12th *Faecal coli* 90, *total coli* 90 *per* 100 *mls.*
Another sample on distribution the same day was free fr
4 repeat samples on each of the following two days were from coli.
Reservoir: faecal coli 90, total coli 90.

ar. 23rd. *Faecal coli* 13, *total coli* 13 *per* 100 *mls.*
3 repeat samples next day were all free from coli.
Reservoir: faecal coli 8, total coli 8.

Oct. 5th. *Faecal coli* 13, *total coli* 14 *per* 100 *mls.*
Repeat samples gave:
Booster station, 1 faecal coli, total coli 4.
Distributed water—2 samples with non-faecal coli each.
Reservoir: faecal coli 250, total coli 850.

Oct. 12th. *Faecal coli* 450, *total coli* 900 per 100 mls.
Repeat samples:

13th.	Faecal 2,	total coli	3	(booster station).
	,, 0,	,,	,, 2	
	,, 0,	,,	,, 2	
	,, 25,	,,	,, 38	
14th.	,, 0,	,,	,, 0	
16th.	,, 0,	,,	,, 2	
	,, 0,	,,	,, 1	
	,, 0,	,,	,, 1	(booster station)

Reservoir: faecal coli 250, total coli 600.
Action taken—reservoir treated with copper sulphate and chlorine increased despite possibility of tastes in supply.

The counts on January 12th and March 23rd are unaccounted for; that of the 5th October may be due to the very high coli count of the reservoir water and the chlorine dose being barely sufficient to sterilise the water in the time of contact. The count on 12th October, despite chlorination, is higher than that in the reservoir and it would appear to be due to a heavy local gull pollution at or near the outlet well and the chlorine treatment could not deal with it. The high count on 13th October was for a sample taken a good distance from this booster station and would probably represent a remnant of the polluted water of the previous day.

There was no interruption in the chlorine treatment to account for any of these results, as confirmed by the finding of 0·10 to 0·15 p.p.m. chlorine at time of sampling.

Excluding the 14 samples with coli mentioned above, the remainder of the samples with coli were as follows:—

Faecal coli present. 5 samples.
1 sample with 1 coli per 100 mls.
4 samples with 3 coli per 100 mls.

Non-faecal coli present. 14 samples.
8 samples with 1 coli per 100 mls.
1 sample ,, 2 ,, ,, ,, ,,
3 samples ,, 3 ,, ,, ,, ,,
1 sample ,, 5 ,, ,, ,, ,,
1 ,, 7 ,, ,, ,, ,,

These coli were derived from " aftergrowths " in deposits in mains and the majority of them were caused through flushing of mains, the faecal coli being present with the non-faecal ones.

(d) Due to distribution conditions, reversal of flow in certain mains occurred for many days in mid-June. This, as well as reverting to normal flow directions, caused serious disturbances of sediment in mains, causing bacteria of *non-faecal coliform* types to be found in the distributed supply during the period 22nd June to 1st July. Seven samples contained from 5 to 170 non-faecal coli per 100 mls. On this particular supply, faecal coli were not found under these conditions. During this period, the reservoir water was free from all coli, even prior to chlorination. Even so, the chlorine treatment was increased to help recovery to normal. Odd samples in undisturbed areas were free from coli.

During the second half of the year 8 samples contained *non-faecal coli*, as follows:—

5 samples with 1 coli per 100 mls.
1 sample ,, 3 ,, ,, ,, ,,
1 ,, ,, 5 ,, ,, ,, ,,
1 ,, ,, 13 ,, ,, ,, ,,

The 5 and 13 coli counts were obtained in August probably as the result of flushing, but other samples taken on the same days were free from coli. All these would be due to " aftergrowths " in deposits and not to pollution entering the mains.

(*c*) Three samples contained 1, 5 and 8 non-faecal coli per 100 mls. Th with 5 and 8 coli were taken on the same day in July and the result w through disturbance of deposit in a main. Another sample on the was free from coli.

GENERAL.

This year the resumption of general flushing of mains has cau samples, more especially in three supplies, to contain higher counts of coliform bacteria of essentially non-faecal types. As pointed ou these coliform bacteria are due to aftergrowths in deposits in mains warmer months of the year and they are not indicative of pollution en mains. It should also be pointed out that samples taken from distu represent a very small fraction of the general supply at any one time.

Chlorination of the supplies has been continuous during the wh year. The general water supply has given the following results:—

Samples free from all coli	86·9
Samples free from faecal coli	96·8
Samples free from or containing not more than 3 faecal coli per 100 mls.	99·4

The water supply has been maintained at a satisfactory bacteriologi

BACTERIOLOGICAL REPORT.

ADDITIONAL RESULTS.

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal
			No. of samples	No. per 100 mls.	No. of samples
Service reservoirs					
Bowdon	14	5	2	1—2	9
Gorton upper .. .	13	4	5	1—90	8
Gorton lower	13	3	6	1—180+	9
Chlorinated supplies					
Bowdon	102	46	15	1—35*a*	56
Denton purification plant	60	49	4	1—2*b*	10

NOTES:—

(*a*) The scraping and re-lining of certain mains in the area caused a gr disturbance in deposits in adjoining mains due to increased flow reversal of flow. Later in the year resumption of general flushing of caused disturbances. These conditions caused coliform bacteria de " aftergrowths " in mains deposits to be found in the distributed wa results were limited to the areas disturbed. The highest faecal coli c 1 each of 11, 25 and 35 per 100 mls. The highest non-faecal coli c 110, 160, 180, 900 and 900 per 100 mls. These results bear no rela reservoir water, the results of which are given above prior to ch Chlorine treatment was stepped up to correct the conditions as soon

(*b*) These results are again due to " aftergrowths " in mains deposits caused by two reversals of flow within 7 days arising from examin large main.

Comments of the Medical Officer of Health on the water supply.

The presence of coliform organisms in the types and numbers cannot be regarded as being in any way detrimental in so far as the these organisms themselves are concerned, but they do represent an potential danger in that a water supply which contains coliform might at some time or other contain pathogenic organisms.

opinion of Dr. E. V. Suckling in his text book on water supplies is with approval: " . . . it must be clearly understood that no coliform a should be present in 100 c.c. quantities of waters which have received t bactericidal treatment, such as chlorination".

water supplies of the Manchester undertaking do not reach that d.

the question of pollution by gulls, Dr. Suckling has stated: " The ce of Bact. coli in moorland, upland and lake waters is often excused ground of pollution by the excreta of animals and birds, but there are urces in this country from which human contamination can now be excluded. Moreover, whilst human pollution is of chief importance, s and birds must be considered as potential agents in the spread of to man by the pollution of water supplies. Gulls have already received mention. The habits of these birds are filthy. They frequent sewage s and may then visit reservoirs and cause serious pollution of the water. they may infect the water with such disease-producing organisms as d and paratyphoid bacteria. The salmonella or food-poisoning bacteria affect man may have their origin from animals, such as swine and rodents, om the excrement thereof gain access to water".

Medical Officer of Health is conscious of and appreciative of the high ds of efficiency and the unremitting vigilance of the Waterworks ment. He is also aware of the enormous difficulties and costs involved ring complete safety of the water supplies. He knows, too, that these s are under constant review and that every endeavour is being made and made to achieve feasible remedies, including comprehensive works of nt nature for the protection of the Longdendale supply already approved Waterworks Committee. Nevertheless, the present position does cause ave concern.

FOOD SUPPLY.

e.

some years, mainly by reason of the incidence of food poisoning, rable attention has been focused on the desirability of providing a fective legislative control of the conditions in which food is manufactured, d or sold. In particular, this need has been described by the different r working party reports on catering and manufactured meat products, during the year under review, the Food Hygiene Division of the Ministry issued a handbook on the promotion of hygiene in premises, equipment thods of handling food.

s publication, with a practical approach, collates well-founded experience vice. Its detailed application of basic hygienic principles to catering nilar food premises may be regarded by some traders as stressing the s; nevertheless, the handbook's recommendations deserve to be ed and need to be observed by all engaged in the food trades.

he latter part of the year a Food and Drugs Amendment Bill promoted Government received its second reading.

Its clauses, directed to securing hygienic conditions, are enabling provi whereby the Ministers concerned would have regulation-making powe deal with details, including those of the structure, equipment and clean of food premises and trade practices. In addition, other clauses would exte other types of food businesses the existing provisions requiring the registr of premises used for the manufacture or sale of ice cream, or the manufa of potted or preserved meat or fish and other preserved foods. The lice of the sale of food elsewhere than in premises would be required by regula providing a control evidently comparable with that applied since 19 Manchester under the Corporation Act of that year. Clauses also deal the control of injurious ingredients, food labelling and advertisement, and " substitute cream."

Prior to the introduction of the Bill, the City Council had appr recommendations of the Health Committee that more effective control c conditions in which " imitation cream " is manufactured or sold in the should be obtained, and, for that purpose, a clause has been included i Corporation Bill which was promoted during the latter part of the year.

Another clause in the Corporation Bill seeks power to require the lice of poultry killing and dressing premises in the City with a view to ens that such business is carried on only under suitable conditions.

Supervision of the wide range of types of businesses engaged i preparation or sale of food in the City has continued with particular r to restaurants, snack bars, canteens and bakehouses. 2,655 inspections made. It must be admitted, however, that with prevailing inspec deficiencies previously mentioned, increasing reliance had to be place information from the public directing the attention of inspectors to pre where their services would seem to be most required.

Concerning any proposed establishment of food businesses, the l with the local office of the Ministry of Food has continued to operate wh applicants are referred to the Department for certification as to the suita of the premises and equipment. 38 were dealt with during the year. is of mutual value to applicants in providing them with information a onset as to the Department's requirements, and to the Department in sec prompt observance of suitable conditions for the particular food bu concerned. Similar advantages accrue from the practice of the City Arch Department of forwarding to the Sanitary Services Division of the Depar all plans dealing with proposed food premises for any observations de necessary.

In the course of their visits to established businesses, the sanitary insp have stressed the essential need for food to be kept clean, cool and co and especial regard paid to the cleanliness of the hands, whilst also dir attention to the general cleanliness of rooms, crockery, cutlery and equipment.

In this latter regard, in some kitchens it does seem that, where dish-wa machines are in use, failure of personnel to carry out manufacturers' instru nullifies advantages of that mechanical method so far as cleanliness is conc It was not uncommon for an inspector to find filmed and streaked cr after mechanical " washing " and that the need for both adequate qu and frequency of change of wash-water and the correct use of suitable dete

Food Service Tricycle With Facilities For Washing Hands.

ot been carried out. One operator thought that the wash-water was ed automatically. Others had no knowledge as to the correct maintenance ir machines. Whilst it is true that this human fallibility is present in any d, mechanical or otherwise, its impact on machine washing is accentuated ficulties experienced by caterers in frequent changes of personnel.

e failure of the management of one factory canteen to comply with the ements of the Department in the provision of a piped supply of hot water kitchen sinks, the installation of a wash-hand basin, the proper ventilation ood store and the display of the notice required by the Food Byelaws ing hand washing, caused proceedings to be taken at the City Magistrates' An undertaking to carry out the necessary work was then accepted, er, and fulfilled.

sence of cleanliness of premises in 61 instances and defects at 39 premises ed prompt attention by the managements involved. Similarly, 47 ns for minor infringements at premises registered for the preparation nufacture of preserved food (there are 496 such premises registered in y) were complied with. Seventy-four warnings were necessary in respect ne conditions found during inspections of 506 bakehouses in the City. rms were also warned for failing to take reasonable steps to prevent risk tamination of unwrapped bread and confectionery contained in vans were being driven with the rear shutters open.

rapid unusual infestation occurred at four separate City restaurants large numbers of fruit flies (drosophila) were found in November and ber during a period of unseasonable mild weather. The basement s were affected and the managements concerned had ineffectively oured to eradicate the infestations by the use of insecticidal spray in the s. The sanitary inspector found that the sources of breeding were in debris of rainwater gutters at the base of the light areas of the buildings; ris including food litter thrown from the windows of the upper floors flies being attracted to the kitchens below. Cleaning of these gutters been done, the use of insecticidal spray in the premises eradicated the ions without any recurrence.

re are 550 persons registered under the provisions of Section 41 of nchester Corporation Act, 1946, for the sale of food from carts, barrows, luding 40 mobile canteens and 15 mobile fish and chip shops. Other old include fruit, vegetables, fish and hot sausages with rolls. One l and forty-four premises are registered for the storage of food by these vendors; some of these vendors share their premises with each other.

rder to encourage habits of cleanliness among outdoor food handlers, nents continue to operate whereby such vendors are granted permits free use of the washing facilities at public conveniences in the City. ion, each mobile snack bar, etc., is required to contain hand-washing with hot water, soap, towel and nail brush. A photograph illustrates s provision has been made on tricycles operating in the City for the hot sausages and rolls.

stration requirements under the Manchester Corporation Act, 1950, ct of street traders, being analogous to, though not identical with, ncerned with food hawkers, are also administered by the Department persons, mostly food vendors, have been so registered.

Milk and ice cream control.

The safety and purity of milk and ice cream distributed in Manches secured by sampling these foods for bacteriological and biological examin and for chemical analysis. These sampling duties are undertaken in conjun with the regular inspection of the dairies and other premises used, an supervision of the operation of the plant and equipment and the metho distribution.

Dairies.

More than 4,000 visits for inspection purposes were made during the particular attention being directed to the standards of hygiene maint Generally a high standard was observed and although a number of c ventions of the Milk and Dairies Regulations were found, in no instance necessary to proceed beyond warning the offenders.

The inspection and checking of the 13 pasteurising and 6 sterilising at the dairies licensed for these purposes have been carried out at least monthly by the milk control inspectors in addition to their routine visi

The efficiency of these plants is reflected in the high percentage (99 cent.) of satisfactory results obtained on samples of the processed milk at the dairies and on the road whilst the milk was in course of deliv hospitals, schools and the general consumer. 671 such samples were throughout the year with only 7 of them (1.0 per cent.) failing to pa prescribed tests laid down in the regulations, viz., the phosphatase te efficiency of heat treatment, the half-hour methylene blue test for the k quality of pasteurised milk and the turbidity test for the efficiency o treatment of sterilised milk.

City and "outside the City" milk producers.

16 samples of raw milk from City producers and 100 samples from " the City " producers coming into the City were examined by the bio test for tubercle bacilli. One of the City's producers' samples proved p as also did 7 of the samples taken from " outside the City " producers, a total incidence rate of 6.9 per cent., as against 14.8 per cent. the pr year. The Ministry of Agriculture and Fisheries were notified of these p results with a request that a veterinary inspection be carried out at the concerned. As a result, 3 cows suffering from tuberculosis of the udde discovered and slaughtered under the Tuberculosis Order.

In addition to the above positive results, five local authorities, adjoin City, notified the Department that 42 samples of the milk taken by their insp from farmers in their area, who were sending all their milk into Man dairies, had been found to contain tubercle bacilli. It was ascertained t milk in question was being received and pasteurised before delivery consumer.

Whilst it is estimated that 99.5 per cent. of the raw milk arriving City is processed after arrival at the dairies, it was disturbing to find the raw infected milk, two samples, which were being retailed to the were of milk from Tuberculin Tested herds. The sale of raw Tub Tested milk is permissible in a " specified area " and as from the 1st J 1954, Manchester will be included in such an area under the provisio Order, made by the Minister of Food, and referred to later.

graded and 63 ungraded milk samples of the above producers' milk lso submitted for bacteriological examination. 75.6 per cent. of the milk samples were satisfactory, whilst of the ungraded milk samples, er cent. were satisfactory.

pply to hospitals, schools and day nurseries.

teurised milk supplied to various hospitals, schools and day nurseries City has been strictly supervised and regularly sampled. The results of aminations have shown that a high standard of quality and cleanliness en maintained and on no occasion was the milk found to contain tubercle

e raw milk supplied to the Langho Epileptic Colony and Booth Hall al, from the attested herds at the Langho Colony farms, has been d frequently. For a short period, difficulty was experienced with to the keeping quality of the milk. Investigations following the failure milk to comply with the statutory methylene blue test found this to be ineffective sterilising equipment. New equipment was ordered immedind in the meantime use was made of hypochlorite solution. This gave tory results and no further difficulties are anticipated. In no case has been tuberculous infection.

December, the Milk (Special Designations) (Specified Areas) (No. 3) 1953, was made by the Minister of Food to come into operation on the uary, 1954. Accordingly, on and after that date, all dairymen who retail ithin the City and surrounding districts specified in the Order must milk under a special designation irrespective of whether the premises hich the milk is retailed are inside or outside the area.

special designations authorised by the Milk (Special Designation) tions, 1949 and 1950, are " Pasteurised," " Sterilised," " Tuberculin " and, until the 30th September, 1954, "Accredited."

ure to comply with the provisions of the Order is liable to penalties the Food and Drugs (Milk, Dairies and Artificial Cream) Act, 1950. ctically the whole of the City's milk supply has been either pasteurised ilised, for some considerable time, the application of the Order will not great difference so far as Manchester is concerned.

mplaints received from the public regarding unsatisfactory milk supply w in number and these were investigated and appropriate action taken.

outbreak of infectious disease implicating the City's milk supply has during the year.

n.

number of premises registered for the manufacture and/or sale of am has now reached the high figure of 1,783 as against 1,732 on the last year and 881 in 1947. Premises registered during the past two e years have been mainly equipped with totally enclosed, automatic, refrigerators and sell ice cream in sealed packets only; the open "olded " ice tub, once so often seen in shops, is now a thing of the past.

most unsatisfactory feature of the distribution of unwrapped ice cream ale from carts and barrows in the streets, as risk of contamination of the t is most likely to occur in this manner. It is gratifying to note, however, e majority of street vendors have co-operated with the department by totally enclosing their vehicles so as to reduce the risk of contamination t and dirt from the street.

Regular visits of inspection have been made to ice cream premises, a general standard of cleanliness has been good. In no instance was it necessary to institute legal proceedings in respect of dirty premi equipment.

105 samples of ice cream were taken during the year for bacteric examination. 87 (82.9 per cent.) were placed in Grades 1 and 2 and therefore, satisfactory. 8 (7.6 per cent.) came into Grade 3 which is satisfactory, whilst 10 (9.5 per cent.) fell into the lowest grade (gra Thorough investigation was made at the factories from which the Gr and 4 samples came and further samples attained Grade 1 standard i case.

It is of interest to compare the results of bacteriological exami during 1953 with those received during 1948 which was the first co year of the operation of the Ice Cream (Heat Treatment) Regulatio 1948 when 108 samples were examined, only 46 (42.6 per cent.) were in Grades 1 and 2, 19 (17.6 per cent.) in Grade 3 and 43 (39.8 per ce Grade 4.

It is satisfactory to note that there have been no cases of infection re to the department during the year which could be traced to ice crea sumption, nor has any complaint regarding ice cream been received.

Iced lollies.

The manufacture of iced lollies was investigated with particular re to metallic contamination. Samples of lolly-ices from dealers and of concentrates from firms manufacturing such compounds in Manchester examined by the public analyst who found that although in some sampl or copper was detectable, the amounts did not exceed safety limits so constitute a health risk, especially where, in respect of the use of syru manufacturers' instructions as to dilution were observed by the dealers

It is felt, however, that the presence of metals could become sig and it is requisite that proper care should be exercised in each of the d stages from the manufacture and compounding of syrups to the freezing solutions.

Milk (Special Designation) Regulations, 1949 and 1950.

LICENCES ISSUED DURING THE YEAR.

Dealer's licence to use the designation:

"Pasteurised"—

(A) Pasteurising establishments	..
(B) Other dairies and bottled milk shops	..

"Sterilised"—

(A) Sterilising establishments	..
(B) Other dairies and bottled milk shops	..

"Tuberculin tested"—

Dairies and bottled milk shops	..

Supplementary licences to use the designation:

Pasteurised	..
Sterilised	..
Tuberculin tested	..

Place of collection of sample	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Percentage	No.	Percentage		No.	Percentage	No.	Percentage
Pasteurising plant at dairy	91	89	97·8	2	2·2	2	—	—	2	100·0
Hospitals	123	122	99·2	1	0 8	24	—	—	24	100·0
Schools and day nurseries	133	131	98·5	2	1 5	25	—	—	25	100·0
On road during distribution	324	322	99·4	2	0·6	6	—	—	6	100·0
Totals	671	664	99·0	7	1·0	57	—	—	57	100 0

(B) RAW UNTREATED MILKS.

Place of collection of sample	Bacteriological examination										Biological examination for tubercle bacilli				
	Graded milk (tuberculin tested and accredited (sold as such))					Ungraded milk*									
	Official Test (sample to pass a methylene blue test)														
	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Per-centage	No.	Per-centage		No.	Per-centage	No.	Per-centage		No.	Per-centage	No.	Per-centage
City farms	4	4	100·0	—	—	12	9	75·0	3	25·0	16	1	6·2	15	93·8
Corporation farms	8	4	50·0	4	50·0	—	—	—	—	—	7	—	—	7	100·0
Hospitals (supplied by Corporation farms)	8	6	75·0	2	25·0	—	—	—	—	—	8	—	—	8	100·0
On road during distribution	2	2	100·0	—	—	—	—	—	—	—	2	—	—	2	100·0
Individual country farms (on arrival at City dairies)	37	27	73·0	10	27·0	51	39	76·5	12	23·5	100	7	7·0	93	93·0
Totals	59	43	72·9	16	27·1	63	48	76·2	15	23·8	133	8	6·0	125	94·0

* There is no legal bacteriological standard for raw ungraded milk. For comparison purposes, however, the same test as that applicable to graded milks has been adopted.

Food and drugs adulteration.

The administration of legislation dealing with the protection of the con against adulteration, misrepresentation, or other irregularities in the s food or drugs has been fully maintained. Three experienced sanitary insp devote the whole of their duties to sampling and the extensive en frequently involved in subsequent procedure. In the selection of sa every regard is had to ensuring that the sampling is done to the best adv with due attention to the range of food and drugs customarily purcha a family. Necessarily, this includes a proportion of proprietary bra pre-packed foods and medicines, and, whilst it is true that reputable facturers often maintain laboratory control of their products, the foo drugs authority could not properly rely on any trade control to prot consumer against inadvertent or other deviations from legal requireme

The period under review was the first year following the abando in 1952, of the Ministry of Food's advisory service to manufacturers re labels intended for use in the description of foods. This service was parti useful both to traders and to food and drugs authorities in securing an a tative uniformity in essentials concerned with correct labelling, but the M ment's experience to date has not shown any marked increase in la infringements. Contraventions of the Labelling of Food Order, 1953, oc in the following pre-packed foods: cereal soup mixture, mustard Christmas pudding, mint jelly and table jelly concerning which warn the manufacturers secured the proper labelling. In addition, the M ment was in communication, at the close of the year, with the manuf of a sandwich-spread on the necessity for revision of the label in use f food.

A further legislative change bearing on the responsibilities of foo drugs authorities became operative on the 1st March, 1953, when the of Maximum Prices Meat Products Order No. 3, 1952, dealing with b pork sausages, was revoked. The Order, in prescribing the meat con such sausages, provided a legal standard for those commodities irrespe the main purpose of price limitation. This was of value not only in a the purchaser that a beef or pork sausage would satisfy that standard b in securing a most desirable uniformity in the administration of the Fo Drugs Act for that purpose by obviating the risk of the adoption of standards by different authorities. In addition, it was of some signific avoiding unfair competition between manufacturers when the p ingredients were in short supply. Since the revocation of the Order, h Manchester's experience has been that the meat content is related to

The number of samples of food and drugs totalled 3,303, of whic were milk samples, including 17 "Appeal to Cow" samples. In a 287 informal samples of milk, 9 samples of ice cream and 45 samples " lollies " were submitted by the milk control inspectors.

Of the 393 milk samples purchased from retailers, only one was be presumptive legal standard, namely 3 per cent. of fat and 8.5 per cent not fat, prescribed in the Sale of Milk Regulations, 1939. A further taken in this case was found to be satisfactory.

8 samples of milk were taken from consignments from farms on arrival ries in the City and 188 of these samples proved, on analysis, to be below rescribed standard. 73 of these samples were deficient in fat but as the ge fat content of the respective consignments was over 3 per cent. no was required; in addition, 18 samples, which were slightly below the mptive standard, when repeated, were found to be satisfactory. Warning were sent to farmers in respect of 62 of the samples and follow-up es were genuine.

gal proceedings were instituted against 6 farmers in respect of 35 samples showed substantial adulteration, and fines and costs amounting to 12s. 7d. were imposed.

Public Health (Preservative in Food) Regulations, 1925—1953.

e Regulations permit certain foods to contain specified preservatives not ling prescribed amounts and subject to certain conditions including ng, or the exhibition of a notice, at the place of sale, to the effect that mmodity contains preservative.

warning letter was sent to one retailer for failing to display the necessary dealing with the presence of preservative in sausage. It was evident ne particular omission had been inadvertent and of a temporary nature, n subsequent visits, the Regulations were being fulfilled.

ceedings were taken against a manufacturer of meat products for the addition of sulphur dioxide to brawn and polony, and a fine of £10 was ed at the City Magistrates Court for each offence.

Public Health Condensed Milk Regulations, 1923—1953. Public Health Dried Milk Regulations, 1923—1948.

samples of condensed and dried milks were submitted to the Public t for examination, and the quality and labelling were found to be in ance with the regulations.

Butter and margarine factories—wholesale premises.

e number of registered premises is 97, and inspections made of each shment found that the requirements of the Department were satisfied ect of either the absence of adulterants or the structural arrangements nises where both butter and margarine are stored.

Food Standards (Ice Cream) Order 1953.

from the 1st June, 1953, the minimum standards of composition of am were restored to those originally prescribed in January, 1951, viz., s than 5 per cent. fat, 10 per cent. sugar and $7\frac{1}{2}$ per cent. milk solids han fat, whilst permitting an alternative standard for ice cream containing ruit pulp or fruit puree and/or " Parev " (kosher) ice.

the 33 samples of ice cream submitted for analysis were found to comply ne prescribed standards.

The Food Standards (Curry Powder) Order, 1949 requires that n powder shall contain lead in excess of 10 parts of lead per million parts powder. One informal sample, found on analysis to contain 15 parts of l repeated formally and was found to be satisfactory. On another occ informal sample was found to contain 25 parts per million and, when formally, was found to contain 22 parts per million. The existing st withdrawn from sale and a warning letter was sent to the retailer who h unable to produce any invoice for the commodity. Careful, subsequen failed to disclose any of the particular brand of curry powder being dis for sale and it is understood to have been completely withdrawn.

A contravention of the Pharmacy and Medicines Act occurred sample of medicated lozenges as no formula was given on the label or The manufacturer promptly corrected this omission and subsequen found that observance of the correct labelling continued.

Minor deficiencies were found in samples of lemon curd, shredd suet and glucose with vitamin D and calcium phosphate, but repeat were found to be satisfactory. In the case of a sample of marmalad to be deficient in soluble solids to the extent of 3.5 per cent., a ca letter was sent to the manufacturer. An informal sample of cheese spr 27 per cent. deficient in fat compared with the declared fat content, sampling officers have been unable to obtain a formal sample, and the con appears to have been withdrawn from distribution.

Extraneous matter was found in a number of samples of food, g private samples submitted by members of the public. In some instanc involved commodities manufactured or packed in the areas of other au and, following reports from those authorities and investigation of the p circumstances where appropriate, warning letters were issued to th concerned. In no instance has the Department become aware of a re of the occurrences.

Adulterated and other unsatisfactory samples and action taken.

Informal samples								Article	Formal samples										
Adulterated or unsatisfactory	Cautioned	Further samples taken or being sought	Irregularity deemed too slight for further action	Referred to Weights and Measures Department	Referred to M.O.H. of local authority concerned	Dealt with under Unsound Food Clauses	Irregularity deemed to be accidental		Adulterated or unsatisfactory	Cautioned	Legal proceedings ordered	Referred to M.O.H. of local authority concerned	Further sample taken	Withdrawn from stock	Legal proceedings: Summoned	Legal proceedings: Fined	Legal proceedings: Amount of fines	Legal proceedings: Amount of costs
45	*	—	—	—	—	—	—	Milk	143	106†	35	—	2	—	35	35	£ 109 s. 10 d. 0	£ 19 s. 2 d. 7
1	1	—	—	—	—	—	—	Bottled mint jelly	—	—	—	—	—	—	—	—	—	—
2	2	—	—	—	—	—	—	Bread	—	—	—	—	—	—	—	—	—	—
2	—	1	1	—	—	—	—	Cake mixtures	—	—	—	—	—	—	—	—	—	—
2	—	—	—	2	—	—	—	Canned cream	—	—	—	—	—	—	—	—	—	—
1	—	1	—	—	—	—	—	Cheese	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	Christmas pudding	—	—	—	—	—	—	—	—	—	—
2	2	—	—	—	—	—	—	Dried cereal soup mixture	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	Dried pulses	1	—	—	—	—	1	—	—	—	—
1	1	—	—	—	1	—	—	Dried soup	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	Energy food	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	—	1	Jelly crystals	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	Meat products	4	2	2	1	—	—	2	2	20 0 0	—
1	1	—	—	—	—	—	—	Pickles	1	—	—	1	—	—	—	—	—	—
—	—	—	—	—	—	—	—	Potato crisps	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	Preserves	2	1	—	—	1	—	—	—	—	—
2	—	2	—	—	—	—	—	Sauce	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	Spices	1	1	—	—	—	—	—	—	—	—
3	2	—	—	—	2	1	—	Suet shredded	1	—	—	—	1	—	—	—	—	—
1	—	1	—	—	—	—	—	Sugar confectionery	—	—	—	—	—	—	—	—	—	—
1	—	1	—	—	—	—	—	Glucose and vitamin D	—	—	—	—	—	—	—	—	—	—
								Medicated lozenges	—	—	—	—	—	—	—	—	—	—

* Followed by formal samples where necessary.

† Cautioned or samples repeated.

REPORT FROM MARKETS DEPARTMENT ON SUPERVIS OF MEAT AND OTHER FOODS.

The Medical Officer of Health is indebted to the General Manage Markets Department for the following particulars relating to the ope of the Department during the year ended 31st March, 1953.

The numbers of animals slaughtered at the City Abattoir during years are shown in Table A; Table B shows the total condemnations City; and Table C the total weight of meat condemned at the City A and Wholesale Meat Market.

The bulk of the meat, fish and fruit which is condemned is found unfit for food on arrival at the markets, railway stations, and wholesale An efficient system of inspection at the centre of distribution lessens t of diseased meat, etc., being exposed for sale in retail shops.

The staff of inspectors comprises 1 chief veterinary inspector, 3 a veterinary inspectors and 10 meat, fish, etc., inspectors.

TABLE A.

Animals slaughtered at the City Abattoir during certain years.

Year ended 31st March	Cattle	Sheep and lambs	Calves	Pigs
1944	39,951	171,076	29,181	1,512
1945	42,927	172,276	18,305	1,477
1946	61,387	168,152	34,881	1,705
1947	64,061	233,675	46,701	1,385
1948	75,051	179,350	34,246	752
1949	58,645	208,725	39,447	2,659
1950	72,449	209,048	44,170	3,058
1951	80,852	216,399	52,259	6,403
1952	97,467	194,143	44,755	7,718
1953	68,400	232,182	31,720	17,466

Table B.

Total condemnation of various foodstuffs during 1944-53.

of food	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
ns)	542	697	774¼	821	852½	808	978	954¾	1,113½	775
is)	112¼	183	168½	190	387¼	284	316¾	160	79¼	57½
ns)	15½	28¾	10¼	26½	144½	80	136	83¾	91½	81
es (tons)..	100	366½	206	127	326½	131¾	162½	109½	61	23
mber) ..	1,200	120	718	384	946	40	640	1,614	900	2198
ead) ..	165	728	1,079	223	156	524	1,835	675	184	658
(head) ..	5,756	8,429	3,855	5,129	2,812	6,465	15,043	7,419	5,048	4,130
(head) ..	5,116	6,704	1,079	3,363	2,217	1,731	11,040	12,610	17,372	9,587

Table C.

Meat condemned at the City Abattoir and Wholesale Meat Market.

Particulars	Year ended	
	31st March, 1952	31st March, 1953
veight of meat condemned at the City Abattoir d Wholesale Meat Market	Tons 1063½	Tons 746½
ch the weight of dressed meat consigned from aces other than the city was	12¾	14¾
d in which were imported offals amounting to ..	71 lbs.	364 lbs.

Unwholesome food condemned

Kind of food	Year ended 31st March, 1952	Year ended 31st 19
MEAT :—	lbs.	l
Beef	2,303,217	1,59
Mutton	13,618	2
Veal	32,142	2
Horseflesh	68	
Pork	139,398	8
Reindeer	168	
Whalemeat	277	
Venison	73	
Imported offal	71	
Goatflesh	5,147	
	2,494,179 = 1,113½ tons	1,73 = 7
FISH :—	lbs.	l
Fish	168,247	12
Shellfish	9,444	
	177,691 = 79¼ tons	1 = 57
GAME	head 184	
POULTRY	5,048	
RABBITS	17,372	
FRUIT	lbs. 205,235 = 91½ tons	18 = 8
VEGETABLES	136,573 = 61 tons	5 = 2
MISCELLANEOUS :—	No.	N
Eggs	900	
Evaporated, condensed and other canned milks	lbs. 8,387	lb
Sundry provisions	128,207	9

ightly over 1,000 tons of unwholesome food were condemned under all ngs by the inspectors of the Markets Department during the year ended March, 1953. With the exception of 40¼ tons, this total comprised the gate condemnations arising from routine duty examinations.

ne 40¼ tons condemned arose out of 346 special inspections involving ons of foodstuffs, classified as follows:—

	Tons
ound to be fit for retail trade	76¾
ound usable for manufacturing for human food	3½
ound usable for animal feeding stuffs	22
ound usable for commercial or industrial purposes	7
ondemned as unfit for any purpose	40¼
	149½

ondemned food is handed over to the Cleansing Department of the ration for processing for commercial or industrial purposes, or for ction by fire. A small portion of the total condemned as unfit for human mption is found usable for animal feeding stuffs and for commercial and rial purposes.

ith the exception of the following, which were seized while deposited or d for sale, the quantities given in the preceding tables were surrendered eing condemned by inspectors of the Department:—

Kind of food	Year ended 31st March, 1952	Year ended 31st March, 1953
try	Head —	Head 1
ry provisions	lbs. 2	lbs. 1½

E.—The term "surrendered" includes cases in which inspectors have discovered some food in the course of their duty, but in which, owing to the salesman's acceptance spector's decision, it has been deemed unnecessary to obtain a magistrate's order prior uction.

Carcases inspected and condemned—year ended December, 1953.

	Cattle excluding cows	Cows	Calves	Sheep and lambs	Pigs	Goats
Number killed and inspected—						
At the City Abattoir	34,274	29,380	28,899	222,811	26,859	211
Brought into the City after killing and inspected	10,195		1,176	6,053	53,163	—
All diseases except tuberculosis—						
Whole carcases condemned:—						
At the City Abattoir	24		373	268	210	8
Brought into the City after killing	—		2	—	10	—
Carcases of which some part or organ was condemned:—						
At the City Abattoir	5,879		67	867	3,883	15
Brought into the City after killing	226*		—	7*	49*	—
Percentage of the number inspected affected with disease other than tuberculosis:—						
At the City Abattoir	9.3		1.5	.5	15.2	10.9
Brought into the City after killing	2.2*		.2	.1*	.1*	—
Tuberculosis only—						
Whole carcases condemned:—						
At the City Abattoir	46	632	92	—	51	—
Brought into the City after killing	—		—	—	—	—
Carcases of which some part or organ was condemned:—						
At the City Abattoir	1,558	6,957	15	—	1,633	—
Brought into the City after killing	12		—	—	3	—
Percentage of the number inspected affected with tuberculosis:—						
At the City Abattoir	4.7	25.8	0.4	—	6.3	—
Brought into the City after killing	.1		—	—	Negligible	—

e public conscience was awakened on this aspect of environmental ion following the high death rate in the London area during the period at the end of 1952, and, in July, 1953, the Government appointed a ittee to enquire into the nature, causes and effects of air pollution and cacy of present preventive measures; to consider what further preventive es are practicable; and to make recommendations.

is Committee, under the chairmanship of Sir Hugh Beaver, published erim report in December, 1953. In the Report the word "smog" s for the first time in an official paper. It recognises that complete f both solid and gaseous pollution, if ever attainable, will take many but it is within practicable reach to avoid the worst evils of smoke and llution. It is simply a question of balancing the cost and inconvenience orcing a more efficient and scientific use of our fuels against all the ages to be obtained in health, convenience and economy from a clear here. This problem is one that must be faced.

e success of the operation of the City's first smokeless zone, and the ty aroused by the London fog disaster caused a great increase in the r of local comments and enquiries on smoke abatement measures. ition, there were many enquiries from other areas seeking information methods in Manchester for reducing smoke pollution. It was fortunate is was the first period for some years in which the smoke inspectorate least up to pre-war strength, although the actual duties and problems present difficult period have greatly increased since pre-war days. The staff could not be placed on normal industrial smoke abatement as a of premises had to be undertaken with a view to the establishment of inal extension to the existing smokeless zone ; this aspect is referred to this report. Special attention had also to be paid to the operation of sting smokeless central area.

in previous years, the principal cause of industrial smoke nuisances und to be due to unskilled firing. Despite the intensive publicity and anda on the need for fuel efficiency, and the special course for stokers the Manchester College of Technology, only a very small proportion men actually engaged in firing furnaces have received any technical g. It would appear that in the present condition of the labour market f the more skilled men prefer to find less arduous employment in other s. It has been observed that, in some instances, employers are reluctant imand careless firemen for fear that they may take offence and seek employment. In most cases, however, even the most unskilled man is o obtain some knowledge of the actual combustion processes taking n a furnace provided that this can be explained whilst he is at work; re diffident about attending classes and, where various shifts are con- it is practically impossible for a stoker to make regular attendances.

s remarkable that in those instances where automatic smoke alarms have nstalled, no cases of smoke nuisances have been reported. It seems ble to surmise that the psychological effect of an audible alarm increases oke consciousness of the staff and, if inadvertently dense smoke should tted, the firemen are immediately warned of some fault in furnace ons. As a smoke nuisance is unlikely to be caused deliberately, a can not only take steps to end the dense smoke emission but, also, he led to detect the actual prior causes of the nuisance by the immediate on of the smoke alarm.

Economic and other circumstances preclude the use of coke in lieu of in most industrial plants, but conditions may arise in which the only solu is the substitution, partly or wholly, of coke in place of coal. Although ju on calorific value, coke is dearer than coal, in actual practice where co inefficiently utilised coke may be substituted without increased cost. A example, in small scale plant where the fireman has other duties to perfor is necessary to leave the furnace for long intervals during which for long pe there is a high excess of air reducing combustion efficiency. When col used there is a steady rate of combustion, excess air is reduced to the minin no smoke is evolved, and the efficiency of the plant is increased. In one inst the use of coke fuel was the only economic solution to a dense smoke emi from a coal fired water-tube boiler plant. These boilers were of an old with the settings at a low level, thus allowing of flame impingement or relatively cool water tubes, with consequent smoke emission. When plant was being worked at low loads the emissions were not necessarily ser but if there was any attempt to work the boiler at the maker's rating, c smoke was evolved. These facts were pointed out to the management the use of coke fuel suggested by the smoke inspector, but his advice ignored and various advisers and consultants called in and special dra equipment installed ; all without success. As a last resort, coke fuel tried after obtaining special deliveries of a quality suitable for the parti conditions. The result has been highly successful, all steam demands h been met at no higher cost than when using coal. It is recognised, how that similar results would not necessarily apply to other plant.

In spite of the many adverse remarks about the quality of post-war it is comparatively rare for the quality of the fuel to be the sole cause of s emission. In those instances where fuel has been the cause, it was mainly to the wrong grade of fuel having been supplied to mechanical stokers heavily loaded plant.

Along with increased mechanisation at the collieries there is necessari increased " fines " content in the fuel, which in turn is conducive under c conditions to grit emissions from the chimneys and special attention is paid to this factor. In one case it was necessary to take legal action to a grit nuisance due to misuse of a coke-fired boiler in a residential area.

The policy of the Department is to co-operate with industrialists a endeavour to understand the special difficulties which may arise. Fo and other purposes, 2,528 visits were made by the smoke inspectors an pleasing to note that these visits are welcomed both by the management boiler plant operatives.

The greater interest in smoke abatement which has been aroused b success of the central smokeless zone has led to a greatly increased numb complaints from the general public—278 complaints compared with 93 in Many of these refer merely to smoke emission which cannot be dealt under the Public Health Act unless a nuisance is being caused. In other the nuisances have been caused by overloaded plant and the only so would be to reduce production until new plant could be installed. In circumstances special precautions are advised to minimise any nuisance new plant can be installed.

The following statement relates to the work of the smoke inspectors under provisions of the Public Health Act, 1936 :—

Time observations taken	518
Black smoke, two minutes and over in half-hour periods	49
Smoke other than black and causing nuisance	8
Black smoke under two minutes	211
Smoke other than black not in such a quantity as to be a nuisance	6
Total amount of black smoke observed in minutes	448
Average amount of black smoke observed (in minutes) per observation revealing black smoke	1.72
Complaints from all sources	278
Visits to works *re* smoke abatement	2,528
Premises where inspectors recommended plant to be altered, improved or repaired	85
Premises where plant was found to have been altered, etc, as a result of inspector's recommendation	63
Cases reported to Committee	57
Cases cautioned or excused	19
Statutory notices served—black smoke	23
Statutory notices served—other than black	7
Prosecutions for smoke nuisances and penalties imposed	4
Amount of penalties and costs	£14 15 0
Statutory notices expiring without further action	14
Approximate number of industrial chimneys	1,444

s reported to Committee—causes of emissions:—

Bad firing	40
Unsuitable fuel	5
Bad firing and unsuitable fuel	1
Defects in plant	11

l smokeless area.

Manchester Corporation Act, 1946, Section 35.

e central smokeless area was inaugurated on 1st May, 1952, and, by d of 1953, valuable experience had been gained of the operation of the ess zone. No deliberate infringements of the Section have been reported ch smoke emissions as have occurred have been due to inadvertence automatic control of fuel burning plant, or to an unsuitable type of ing delivered. It is recognised that, under favourable conditions, the ed system of firing operates at a high efficiency with minimum smoke n, but mechanical failure, unsuitable fuel or unskilled control may of varying densities of smoke emission. In addition, certain features matic control may necessarily lead to periodic smoke emission. In such es occupiers are urged to install some method of smoke alarm, so that warning of any smoke emission is given to the operator of the plant. the year, the occupier of a large commercial building discontinued the a thermostatically controlled coal-fired underfeed stoker because of ble fuel supplies and inefficient operation of the thermostatic control. al-fired stoker was replaced by a coke stoker although it is expected uring a complete heating season, the fuel costs and mechanical main- will be higher than with coal.

In general, the welcome co-operation of the public has been most ma and occupiers who may have gone to the expense of converting their appli to smokeless operation have no hesitation in reporting anything they consider as " smoke " from any premises in the vicinity. Such inci occupy a large amount of staff time both because of the sporadic natu such an emission and the tracing of its source, particularly when the chi or stack cannot be seen from the street or any adjoining building. In instances the " smoke " has been due to the volatile content of the smo fuel, or to water vapour produced during combustion or evaporated fro moisture content of solid fuel.

Although there have not been scientific measurements of pollution the zone, cleaner conditions have been noticeable. Suspended mat necessarily carried by the wind into the area, but there has been an abse the heavier matter, such as the larger particles of soot, which normall near the source of emission. In some instances there has been greater vis in the smokeless zone than in the adjoining areas. This may be due evolution of warm air and the smokeless products of combustion fro area, which act on the moisture laden air in a similar manner to FID airfields during the war.

The success of the initial smokeless zone experiment has been so n that, on the instructions of the Health Committee, a further survey of 13 was carried out with a view to forming a marginal extension of " the area " to be bounded by Oxford Street (from Portland Street), the viad the Manchester, South Junction and Altrincham Railway, London Ducie Street, Dale Street, Church Street, Cannon Street, Bank Bui Macdonald's Lane, Lower Cannon Street, Cannon Street, Cateaton Victoria Bridge, River Irwell, Albert Bridge, Bridge Street West, Bridge Deansgate, St. Mary's Gate, Market Street, Piccadilly, Portland Street.

The survey had revealed that within the 516 separate premises in t there are 6,694 appliances in use for heating, cooking, hot water or supply; 355 of the appliances being in premises used as dwellings. 6,694 appliances in use, 5,115 are operated smokelessly, being gas, oil or appliances, 431 use solid smokeless fuel but are not smokeless during up and the remaining 1,148 appliances, using coal, are not smokeless.

(i) Number of appliances in use		
(ii) Number operated smokelessly..		
(iii) Number not operated smokelessly:—		
Open grates	990	
Heating—		
Hot water or steam supply boilers	43	
Heating stoves	28	
Kitchen ranges	87	
	—	1,1
(iv) Number operated smokelessly except during lighting up:—		
Open grates	12	
Heating—		
Hot water or steam supply boilers	313	
Heating stoves	104	
Kitchen ranges	2	
	—	

ius, if the prohibition of smoke is extended to this area, 1,579 appliances ›e affected and the following information is supplied about these nces:—

pen grates (1,002):

All the grates are capable of burning semi-coke such as " Coalite " and the use of gas okers would overcome the emission of smoke during lighting of the fires. Alternatively, me occupiers may prefer to install gas or electric heating appliances.

ilers for heating, hot water or steam supply (356):

313 of these boilers are using coke as fuel and are operated smokelessly except during hting up. The provision of a gas lighting torch would secure the necessary smokeless eration during the ignition of the coke. The remaining 43 boilers are using coal with echanical stoking to 41 boilers and hand-firing to 2. Occasional emissions of smoke varying densities occur from these appliances and in order to secure smokeless operation onstruction or conversion of the plant may become necessary.

ating stoves (132):

104 of these stoves are using coke as fuel and are operated smokelessly except during ting up; the remaining 28 are burning coal but are capable of burning coke. The stitution of coke for coal in these 28 stoves and the use of gas pokers for ignition with the stoves could secure smokeless operation.

chen ranges (89):

2 of the ranges are using coke as fuel and in 83 other ranges solid smokeless fuel ld be used but in each case gas ignition would be necessary to secure smokeless ration. In the remaining 4 ranges, bituminous coal is being used and replacement by okeless fuel appliances would be necessary.

estimated that, in the area, the average weekly consumption of bitu- coal is 310 tons, anthracite 3 tons, coke 340 tons and oil 22 tons.

Department is informed that sufficient supplies of solid smokeless fuel e available to meet the requirements of occupiers of premises within , and representatives of the North Western Electricity Board and Western Gas Board have indicated that the increased demand for ty and gas, or for the supply and fitting of the necessary appliances, e satisfied.

as considered practicable that this area could be declared a smokeless be operative from the 1st October, 1954; an Order was submitted to ister of Housing and Local Government for confirmation and this is

ion of smoke from newly installed furnaces.

Manchester Corporation Acts, 1946 and 1950.

provisions of the above Acts enable the Corporation to control the on of new furnaces so as to ensure, subject to certain exceptions, ew fuel burning installations shall be smokeless as far as is practicable. ter was the first local authority in the country to obtain these powers e 1946, the Corporation has required that all newly installed furnaces within the purview of this legislation shall be mechanically fired if us coal is intended to be used.

So long as a new installation is smokeless as far as is practicable, i compulsory for an industrialist to seek formal approval from the Corp and, in actual practice, only a minority do so. The Department, h becomes aware of new installations from informal enquiries m consultants and from visits of smoke inspectors to the various wor addition, such information is obtained from the scrutiny of plans whi been submitted for approval to the Corporation in respect of building and town planning provisions. These plans are forwarded by th Architect to the Sanitary Services Division of the Department wh burning installations are shown. In these latter cases the industria their consultants are interviewed, and the requirements of the Corp explained to them. In all such cases where coal burning furnaces were i to be used, the occupiers of the premises agreed to install mechanical r of firing. During the year six formal certificates of approval were is relation to small scale plant, three of which were gas fired, two coke fi one mechanically fired with coal.

Recording of atmospheric pollution.

Prior to 1912, observations for the measurement of atmo pollution were made independently by local authorities, but in that conference was called so that some standardisation and methods sh evolved so as to allow that information by different observers sh reasonably comparable. The result of this conference was the appo of a Committee for the Investigation of Atmospheric Pollution. In financial arrangements were reorganized, part of the cost being borne b who were interested in the subject of atmospheric pollution, and the re of the cost being found from a grant of the Department of Scient Industrial Research. The Committee was reconstituted in 1945 as a Co of the Fuel Research Board, and is empowered to consider the preve atmospheric pollution as well as its measurement. Standardisation of i ment led to improvements in the design of instruments and method in turn, brought about research into the types, movements and effec pollutants.

The Atmospheric Pollution Research Committee divides atm pollution into gases, large particles which are deposited fairly quickly their place of origin, and small particles including smoke which suspended in the air for a long time. The nature of the impurity is det partly by the particular industries in the neighbourhood, but pollution from the combustion of coal is to be found in most parts of the cou is estimated by the Department of Scientific and Industrial Research Great Britain there are emitted annually, 2.3 million tons of smoke, 0.5 tons of ash, and 5.0 million tons of sulphur dioxide. About half the s produced in domestic grates, although these use less than a quarte coal. About four-fifths of the ash and sulphur dioxide come from i undertakings.

The principal instruments used for the measurement of pollutio the Deposit Gauge, the Lead-Peroxide Instrument, the Smoke Filter, Volumetric Sulphur-dioxide Apparatus. Another instrument, recently by the British Cotton Industry Research Association, measures poll " murks " and by courtesy of the Director is described later in this r

The Deposit Gauge is somewhat similar to a rain gauge and is general purpose instrument for measuring the heavier particles of p although it does not receive them in the same proportion as they are into the air.

The Lead-Peroxide Instrument provides an index of the activity of sulphur ide in the atmosphere so that some estimate may be obtained of the effect e polluted atmosphere on building materials. Lead peroxide is used because acts with sulphur dioxide in a predictable and uniform manner. As with leposit gauge, changes in meterological conditions can affect the monthly of the instrument.

he Smoke Filter measures the finer particles or the suspended matter n remain suspended in the air for a longer time. The matter collected is ally referred to as " smoke." The apparatus consists of a pump, electrically n, which draws about 50 cubic feet of air through a filter paper each day. e end of the test the discoloured filter paper is compared with a standard of shades from which the average concentration of smoke is estimated.

ne Volumetric Sulphur-Dioxide Apparatus consists of a bubbler containing te solution of hydrogen peroxide through which about 50 cubic feet of passed each day. The sulphur dioxide is removed from the air to form uric acid, by the reaction $H_2O_2+SO_2=H_2SO_4$. The volumetric sulphur le apparatus is usually used in conjunction with the smoke filter described . Because sulphur dioxide is necessarily evolved during the combustion l, the amount collected by the volumetric sulphur dioxide apparatus will ome indication of the amount of coal consumed in the vicinity.

e Corporation maintain seven deposit gauges within the City and one owle House, Handforth, which is used for the purpose of comparison. se variable factors such as meteorological conditions may affect the gs, it is considered advisable to use the average results for five years mparative studies. In the table which follows it will be noted that there reduction in the amount of deposited atmospheric pollution at all the with the exception of that at Booth Hall. The increase at Booth Hall ue to a slight increase in insoluble matter. The sulphur pollution as ed by the lead-peroxide method also shows reductions compared with erage of the previous five years. This may be due to reduced coal mption in the area.

Deposited atmospheric pollution.

(Tons per square mile.)

Monthly averages together with the averages for the previous five years.

n	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
	1953	Five yearly average	1953	Five yearly average	1953	Five yearly average	1953	Five yearly average
ll	2·2	2·6	4·70	5·91	6·47	5·91	11·17	11·82
ırk ..	2·6	2·9	8·72	8·31	6·46	6·43	15·18	14·74
.. ..	2·7	3·0	6·52	10·45	5·44	6·93	11·96	17·38
rk	2·4	2·8	11·09	13·86	7·53	8·30	18·62	22·16
.. ..	2·6	3·0	16·70	34·24	10·26	11·92	26·96	46·16
1	2·4	2·9	12·15	12·89	7·40	7·81	19·55	20·70
for all	2·2	2·7	10·57	10·24	5·28	6·07	15·85	16·31
.. ..	2·4	2·9	10·06	13·69	6·98	7·63	17·04	21·32

Station at Knowle House, Handforth.

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total s
	1953	Five yearly average	1953	Five yearly average	1953	Five yearly average	1953
Knowle House ..	2·3	2·7	3·21	3·78	4·19	5·00	7·40

Sulphur pollution.

(Measurements by the lead peroxide method)

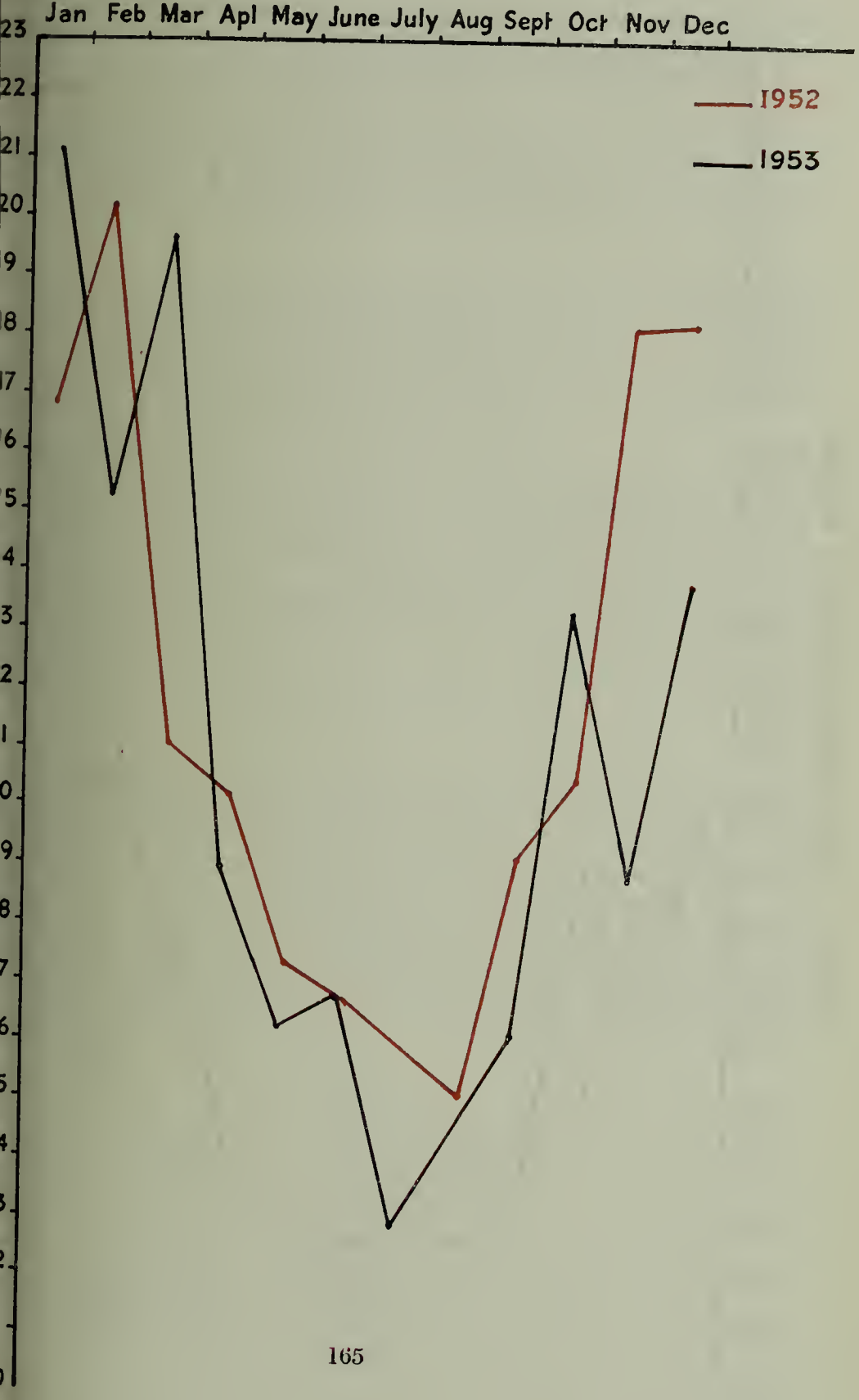
Weight in milligrammes SO_2 per 100 square centimetres exposed surface per da

Monsall		Rusholme		Withington	
1953	Five yearly average	1953	Five yearly average	1953	F ye ave
4·23	4·75	2·39	2·97	1·61	1

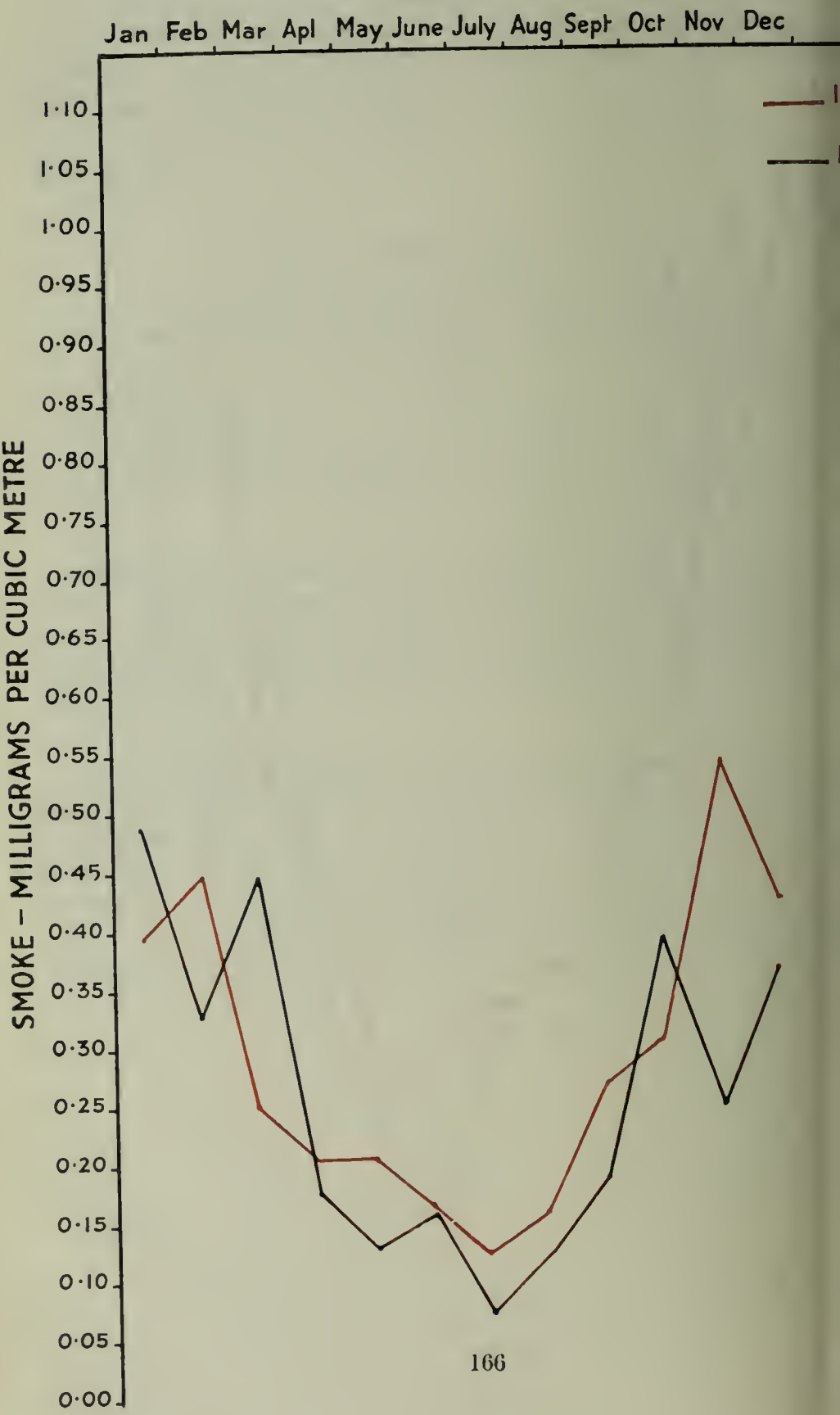
Sulphur pollution measured by the volumetric apparatus at Rusholm shows a reduction compared with the previous year. The suspended (smoke) collected by the smoke filter at Rusholme also indicates a fall con with the previous year, and it seems probable that this may be due to re coal consumption.

In the accompanying graph of the suspended impurity at Rusholme be seen that as in the previous year the smoke pollution falls to its lowes in July. This trend suggests that the pollution collected by this gauge is of domestic origin. The heaviest pollution of 1.314 milligrams of smo cubic metre occurred on the 6th March, a day on which there was botl and fog. The lightest pollution measured was on the 18th May, a sun with light cloud when there was 0.041 milligrams of smoke per cubic of air.

Yearly cycle of sulphur dioxide by the volumetric method—monthly mean concentration at Rusholme in volumes. SO_2 per million.



Yearly cycle of suspended impurity (smoke) at Rusholme—monthly mean concentration in milligrams per cubic meter.



he British Cotton Industry Research Association, having a particular st in the effect of " air dirtiness " on textiles, is concerned with measure- for that purpose and in its laboratories at the Shirley Institute in Didsbury method has been devised.

will be recollected that with the standard smoke filter of the Department ientific and Industrial Research, the weight of solid suspended matter e) in the atmosphere is estimated by drawing a known volume of air 50 cubic feet) through a disc of filter paper. Each separate period of ng lasts 24 hours, and the weight of suspended matter retained on the paper is estimated by visual or photometric estimation of the stain which verted into a mass concentration of suspended matter by reference to a tion curve.

hilst based on this standard smoke filter technique, the method of the Institute differs from that of the Department of Scientific and Industrial ch in three respects and the Medical Officer of Health is greatly indebted Director and Council of the British Cotton Industry Research Association following information dealing with the method and its application to asurement of the dirtiness of the atmosphere:—

The pumping rate is increased from 2 cubic feet per hour to 2 cubic feet per minute. Sampling periods are thereby reduced, giving rapid testing and enabling a more detailed survey of air dirtiness to be carried out than is possible with the slower pumping rate. Sampling times of between 1 and 5 minutes have been found adequate for the whole range of air dirtiness likely to be encountered in or near towns. Air dirtiness trends within an hour may, therefore, be followed if desired.

The equipment used has been made entirely automatic in operation. The atmosphere may thus be sampled at pre-determined intervals throughout day and night without human assistance.

The results are expressed in terms of the visual effect produced by the collected solid matter and not in terms of its mass concentration.

of air dirtiness.

n the laboratories of the Shirley Institute air dirtiness is expressed in s of the measured change in the reflection factor of the filter paper of the volume of air drawn through a known area of the paper. The is named the MURK, and its exact definition in terms of the above rs will be given in a forthcoming scientific paper dealing with the matic equipment and its applications. The range of outdoor values r observed by us is from approximately 6 murks on the outskirts of rth-east Lancashire town with the wind blowing from open moorland out 13,000 in Manchester during very severe fog. The scale of murk s given in Table I will usefully describe the cleanliness or dirtiness of tmosphere.

TABLE 1.

0	to 50 murks	..	outstandingly clean air
50	to 100 murks	..	" clean " air
100	to 250 murks	..	moderately clean air
300	to 600 murks	..	fairly dirty air
800	to 1,200 murks	..	unpleasantly dirty air
	1,200 murks	..	light fog
,000	to 6,000 murks	..	dense town fog
over	10,000 murks	..	" pea-souper " fog

Results.

Most of the data given in this report refer to the outdoor atmo at the Shirley Institute in Didsbury, where the air was sampled at a of 30 feet above ground level in order to avoid local disturbances traffic, etc. A few data are given for the outdoor air in Sackville Manchester, sampled at a height of about 50 feet above street level.

Table II gives the approximate average values for the dirtiness outside air at Didsbury from June to December, 1953.

TABLE II.

June	130 murks
July	40 murks
August	50 murks
September ..	130 murks
October	650 murks
November ..	200 murks, except during foggy periods, when values up were obtained.
December.. ..	250 murks, except during foggy periods, when values fr to 13,000 were obtained.

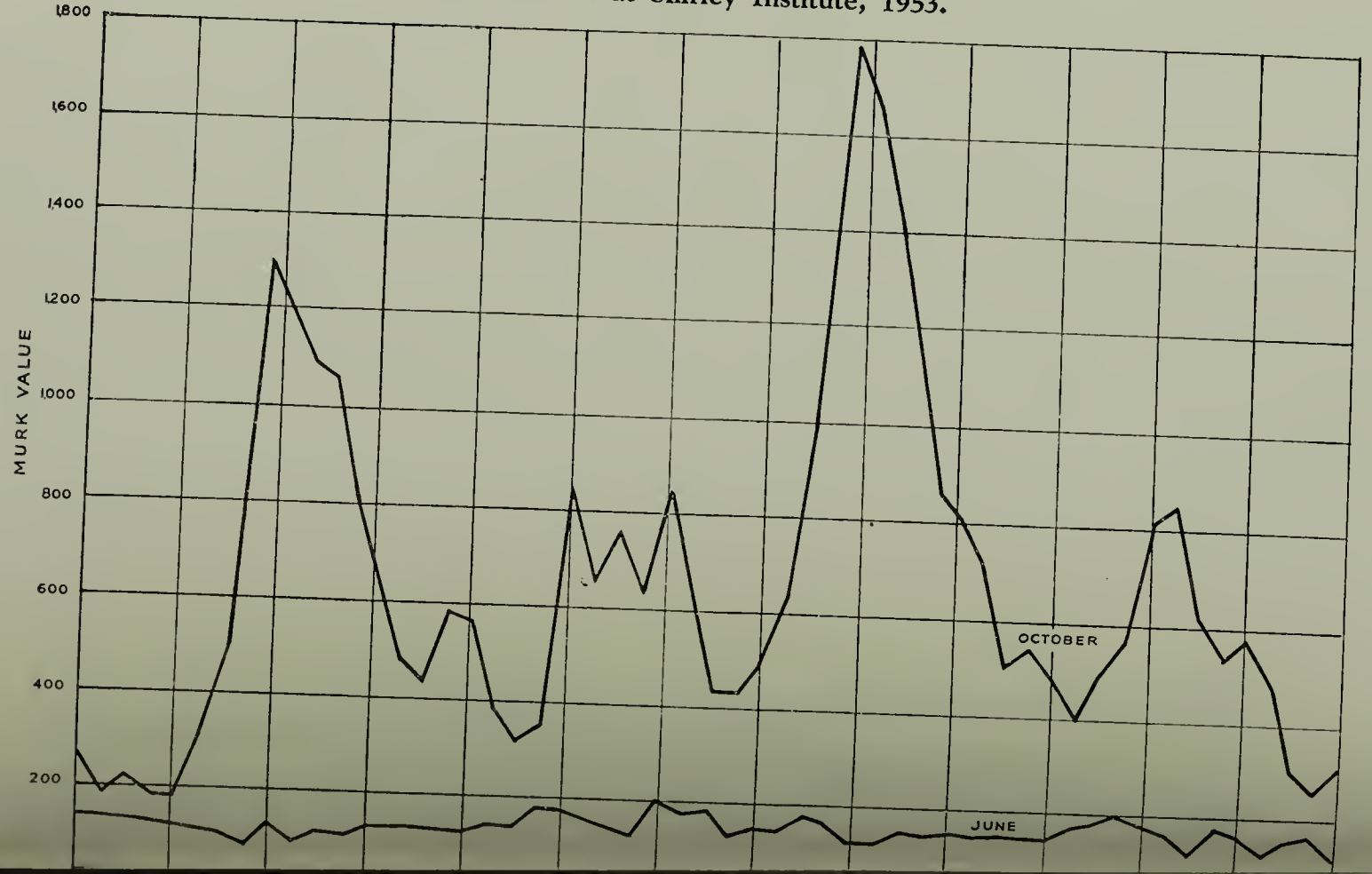
Apart from odd days, November and December, 1953, were mo exceptional and unseasonal mildness and clarity at Didsbury. E the general level of air dirtiness is lower in the summer than in the and early winter. A striking difference was observed between the trend in air dirtiness in settled weather during the summer and du later months at Didsbury. Typical trends are shown in Fig. 1. during the summer months there is no appreciable change in air throughout day and night, a remarkably consistent diurnal trend settled weather during the autumn and early winter months maximum cleanliness at 5 to 6 a.m. and maximum dirtiness at 6 to

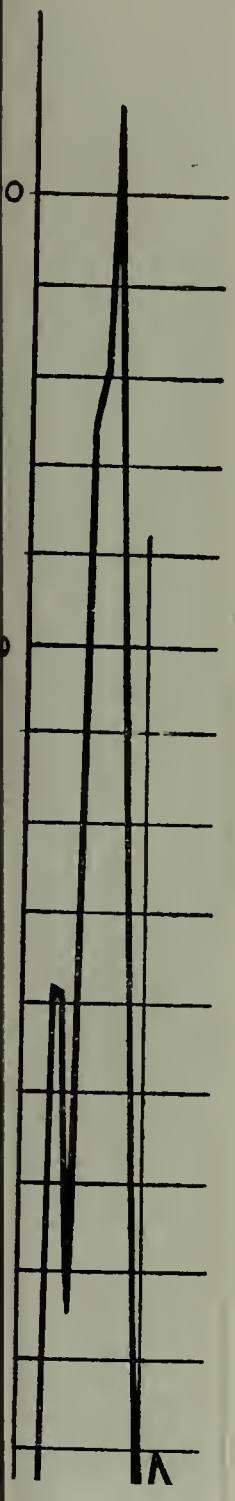
Hourly records of air dirtiness at Didsbury from 17th to 25th No 1953, are plotted in Fig. 2. The weather at Didsbury on 17th N was foggy. This was the day of Princess Margaret's visit to Ma City centre where, it is understood, the pall was more intense Didsbury. The following 7 days at Didsbury were, however, of exc mildness and clarity for November, and the average level of air over that week was about 190 murks, only slightly higher than the value for June (130 murks). This represents exceptional atm cleanliness for November—the average value for October was 650 The diurnal trend referred to above in connection with Fig. 1 is Fig. 2 to be consistent throughout the week of settled November we

Although the air dirtiness trend appears to be roughly pr during settled weather in the residential district of Didsbury, it means predictable during unsettled weather. The effect of an foggy conditions is shown in Fig. 3 which gives graphically the air

Fig. 1.

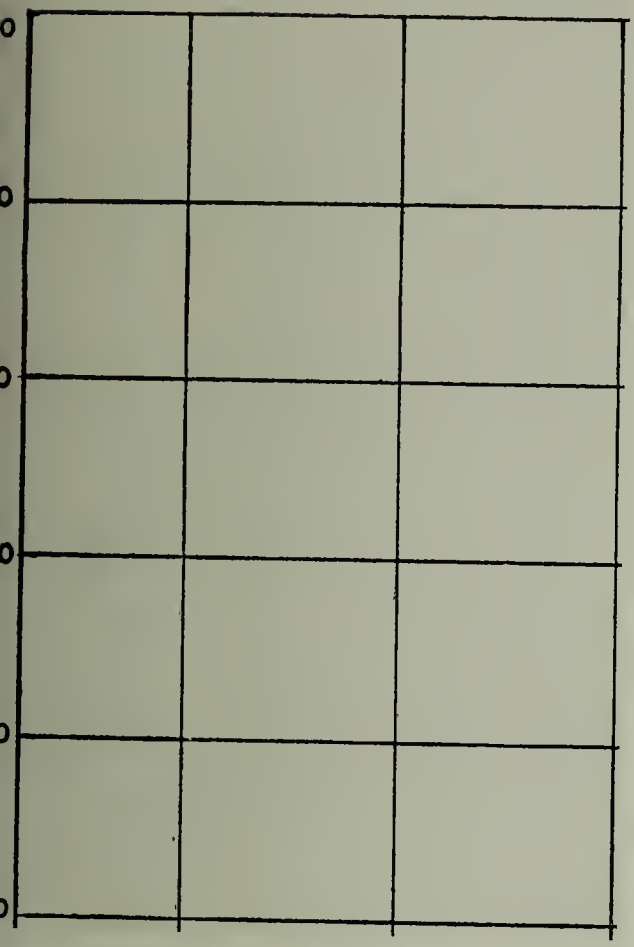
Outdoor air at Shirley Institute, 1953.

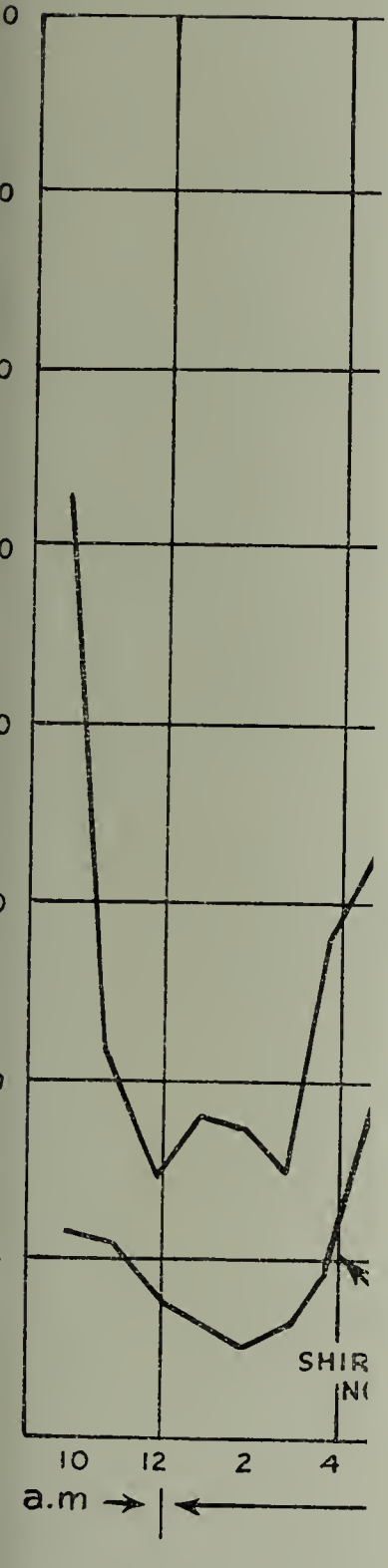




Fig

Outdoor air at Shirley Institute fr
31st Dece




SHIR
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10
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ata for a 24-hour period from 9 p.m. on December 30th to 9 p.m. on)ecember 31st, 1953. The data were obtained with the automatic equip-ient set to operate at intervals of 10 minutes, so that 145 records of air irtiness were obtained during the stated time interval. The settled)nditions of late December 30th and early December 31st were upset by ie onset of foggy conditions during the morning of the 31st, and these)nditions persisted in varying, and, generally, in intensifying degree until ie tests were stopped at 9 p.m., by which time a " pea-souper " fog had ngulfed Didsbury. Fig. 3 shows that large changes in air dirtiness can ccur in short intervals of time, e.g. the murk value increased by 200 per nt. in 30 minutes between 8-40 a.m. and 9-10 a.m. on December 31st.

Fig. 3 illustrates an advantage of the high sampling rate made possible the adoption of a fast pumping rate. The average murk value over the -hour period is of the order of 2,500 murks, but a single exposure of hours' duration would have given no indication of the very great riation in air dirtiness which occurred during that period, viz.: from 0 to 12,900 murks, an increase of roughly 750 per cent.

Early in November, 1953, the automatic equipment was set up at the anchester College of Technology to sample the outdoor air in Sackville reet at a height of about 50 feet above street level. At intervals during ytime, corresponding tests were made outdoors at the Shirley Institute order to obtain a comparison of the dirtiness of Didsbury and of City . The tests at the Shirley Institute were made with a manually operated strument and are consequently fewer in number. The results obtained e shown graphically in Fig. 4; they indicate a similarity of trend in air rtiness in Sackville Street and in Didsbury during the short period of the sts, and show that at certain times during this period the murk value in ckville Street is roughly twice the value at the Shirley Institute."

HOUSING CONDITIONS.

In the latter part of the year, following the publication of the Goveri White Paper on Housing, the Housing Repairs and Rents Bill recei second reading.

The vital importance of this contemplated legislation was reflected discussion which took place at the special housing conference conv the Association of Municipal Corporations in December which was ad by the Rt. Hon. Harold Macmillan, M.P., Minister of Housing an Government. The particular significance of the proposals to Manch clearly seen in the number of houses in the City which, by reason of defects, serious disrepair, bad arrangement or the narrowness or bad ment of the streets, are unfit for human habitation and the corresp high incidence of work in securing repairs. Further, the extent of the st decay of so many houses concerned is such that repeated repairs are with the object of providing no more than wind- and weather-tight cor and freedom from serious dampness. This applies particularly to the c of roofs and is demonstrated by a close co-relation between large nun complaints and heavy rainfall.

During the year, approximately 56,000 inspections were made district sanitary inspectors and 15,260 preliminary and statutory notice upon owners to remedy defects. In 200 cases it was necessary to tal action ; in most of these cases the notices were complied with at th but 89 nuisance orders were granted by the magistrates and in 2 instan were imposed.

The experience of the Department in procedural delays in securing repairs, especially to houses with no known owners (63 such hous dealt with during the year) has been such that, at the end of the year, Council was seeking power in a Corporation Bill to provide speedie for that purpose.

Similarly, post-war experience of numerous sub-standard hous which rent is not being collected has shown distinct limitations in the powers available to the Corporation to require information as to the ow In one instance the former owner of some unfit dwelling-houses re disclose the identity of the purchaser who did not choose to exercise a of ownership and could not be traced by the Department. These an circumstances have prompted the Corporation to seek power to cor person who has sold or otherwise disposed of, leased or let, any pre the City, to provide the name and address of the person to whom the has been so transferred.

Repairs to deal with nuisances were carried out by the Departmer houses at a total cost of £4,756 either in default or at the request of th upon whom Public Health Act notices had been served. This wor Public Health Act procedure dealt only with the minimum amount c necessary to abate the prevailing conditions causing nuisances and the ture incurred varied correspondingly. In some instances, where th disrepair included extensive dilapidation of roofs and gutters, etc., ranged between £130 and £180 per house although the average cost fo the 422 houses was only slightly more than £11. Unfortunately, as earlier, the general condition of so much of this property is such as t recurring action to deal with deterioration causing a state of nuisanc work was carried out at 657 premises on the maintenance of publi under the provisions of Sections 23 and 24 of the Public Health A The total cost of this latter work undertaken by the Department wa which was charged to the owners concerned.

Applications for certificates of disrepair under the Rent and Mortgage, etc., rictions Acts were few, only 9 being received, and certificates were issued ne Committee in 6 cases. In the remaining 3 instances, the Town Clerk ng advised that the particular houses were subject to "new" control r the 1939 Act, certificates of disrepair would not have enabled the tenants ithhold the permitted increase of rent and the applications were not eeded with.

ne report was granted to an owner under the provisions of the Rent and gage Interest Restrictions Act, 1923, that the house had been placed in a nable state of repair ; defects which had previously caused the issue of a cate of disrepair having been remedied.

uring the year the detailed inspection of houses for possible inclusion irance areas was resumed. The rate at which areas of old, worn-out and sted dwellings can be cleared, however, is a matter of grave concern, of which clearly depends on the outcome of the Corporation's applications anning permission to develop land outside Manchester. In the meantime cidence of deterioration is reflected in the increasing number of unfit s which become so structurally dangerous as to compel prompt rehousing occupiers and demolition of the property. Within the past twelve s, 657 of such houses were demolished.

ar clearance areas.

connection with a planned approach to the clearance of unfit houses a local inquiry was held by the Minister of Housing and Local Government 21st October, 1953, when objections to the Ridgway Street (Ancoats) g Compulsory Purchase Order, 1953, were heard. The Order involves uses and the decision of the Minister is awaited.

urvey of the St. George's Clearance Areas, originally represented to the r of Health in 1939 as containing 1,183 houses, revealed that only 641 were in existence, 542 houses having been demolished as a result of mage, serious dilapidation and structural danger. An official repre- n dated 3rd July, 1953, involving 504 of the remaining unfit houses was d by the Health Committee and the Liaison Sub-Committee appointed City Council is considering whether any portions of the areas should ded in a Compulsory Purchase Order.

equent to the date of the representation, the structurally dangerous n of 20 of the houses became such as to compel demolition.

, the number of houses in the Ridgway Street and St. George's clearance the 31st December, 1953, was 722, involving the rehousing of 703 should the orders be confirmed by the Minister of Housing and Local nent.

nspection and survey of a further area of approximately 770 houses completed and will be considered for action under Part III of the Act, 1936, in the immediate future.

clearance areas.

are eight outstanding clearance areas which were represented prior r, where Clearance Orders were made by the City Council, but did the stage of public Local Inquiry and have remained in abeyance.

The areas include, St. George's, Hutchins Street, Harpurhey, Street, Enoch Street, Ruth Court, Fog Lane and Oldham Road (New with a total of 1,907 houses of which 800 houses have in the meanti demolished as a result of war damage, serious dilapidation and st danger, leaving 1,107 houses still to be dealt with.

The total number of houses demolished in post- and pre-war c areas during the current year is 64, and 57 families have been displ which 53 were rehoused by the Corporation.

Individually unfit houses.

16 houses owned by " a man of straw " were represented as unfit fo habitation under the Housing Act, 1936, Section II, and demolitio were made by the City Council. The families have been rehoused Corporation ; 6 of these houses have been demolished and the re are in course of demolition.

12 houses represented in previous years are unoccupied and the e bricked up. The houses have not been demolished as such action m the stability of adjoining properties.

When an application is made by a property owner for permission to c an occupied dwelling-house under the provisions of the Manchester Cor Act, 1946, Section 31, the Corporation will not undertake to reh occupants unless the house upon careful inspection is found to be " human habitation and structurally dangerous." The increasing nu voluntary applications from owners and agents is indicative of the unfit condition of areas of dwelling houses, mainly situated in the inn of the City, in such an advanced stage of disrepair and dilapidation, th old houses are in grave danger of collapse. 632 such houses were fou unfit for human habitation and certified by the City Architect as str dangerous.

657 houses were reported by the City Architect as having been de during the year, but some of these demolitions represented houses wh dealt with and the work commenced during the preceding year.

594 families from individually unfit houses have been rehoused Corporation and 20 families found their own rehousing accomm There are 221 families to be rehoused from unfit and structurally d houses at the end of the year and 402 houses await demolition.

Applications for rehousing on medical grounds.

The increase in the number of applications again focuses attenti this major social problem, bad housing. Letters from hospital au doctors, welfare organisations and many other sources are regularly stressing the hardships and the detrimental effect of sub-standard a crowded housing conditions upon the health of the applicant familie case is carefully considered and if the medical circumstances warr action an award for preferential rehousing is given and the Director of informed. Unfortunately, in many cases there is unavoidable delay in r these families owing to the shortage of new houses.

2,235 cases were dealt with during the year, of these 1,625 or 72 warranted preference for rehousing on medical grounds. The number o offered rehousing accommodation by the Corporation under this hea 845.

ment of overcrowding.

has not been practicable for the Department to maintain an accurate of the precise incidence or nature of the overcrowding of houses but it wn that at least 1,968 dwelling-houses were overcrowded under the al Standard on the 31st December. This figure includes 177 new cases rcrowding reported during the current year. Details are as follows :—

oximate number of overcrowded houses	Number of families	Adults	Children
uses with 1 family	1,221	7,645	2,537
,, ,, 2 families	1,136	4,026	1,211
,, ,, 3 ,, ...	423	1,032	278
,, ,, 4 or more families	152	451	185
	2,932	13,154	4,211

l of the above families are occupying houses which are too small for equirements and 747 houses are overcrowded by reason of lodger

ll cases of overcrowding brought to the notice of the Department, the of Housing is informed if the tenant and/or lodger families are d for a Corporation house.

Your Homes Scheme."

nce Regulation 68 CB relating to the sharing of homes was repealed th December, 1952, so far as the registration of new accommodation rned, but existing registrations are not yet affected and the number of registered as being sub-let within the scheme is 188.

let in lodgings.

cordance with the byelaws made under Section 6 of the Housing Act, house " intended or used for occupation by persons of the working nd let in lodgings or occupied by two or more lodger families should ed to the Department. Lodger families, however, do not include sons or daughters living with their parents.

are 1,107 houses so registered but, in spite of the byelaw requirement tification to the Department, it is not considered this figure truly s the total number of houses let in lodgings in the City. Invariably, ications arise from visits being made for other purposes by the district nspectors, and, owing to staff depletion, it has not been practicable the necessary supervision of all registrable premises.

nspections were made of the registered houses to check on the e of byelaw requirements directed to sanitary accommodation, lighting of rooms, staircases and passages, cooking and washing and cleanliness of the premises. It was necessary to issue cautions ances concerning dirty conditions, whilst 18 informal and 9 formal ere served to compel attention to the Department's requirements.

The houses visited included those which are subject to the provis Section 57 of the Manchester Corporation Act, 1950, dealing with the and management of houses let in lodgings by persons not residing premises. The additional power available over this type of house h found to maintain the improvement in the general standard of the p recorded in previous years.

Common lodging houses.

One common lodging house which had provided accommodation men has closed down since the last annual report and there are now 10 houses 2 of which (for 464 men and 210 women respectively) are ov the Department and 3 by social organisations. These, together v remaining 5 privately owned establishments (for 251 men), provide modation for a total of 1,478 men and 210 women.

In the report for last year, reference was made to an appeal being to the City Magistrates' Court against a refusal of the Corporation t the registration of one privately owned lodging house. Since that date Corporation's requirements concerning the proper maintenance of th of escape in case of fire becoming satisfied, the registration was rene

In cases where the standard of maintenance is found to be unsati renewal of the registration of the premises is granted only for a shorte than the customary twelve months and the keeper is required to carry requisite works of repairs or renewals before the expiration of the period. In one such case, where the means of escape in case of fire was of overhaul, the period of registration was limited to three monti work having been attended to within that time, the registration was for the usual period of twelve months.

In view of common lodging houses being so liable to become inf vermin, particularly body-lice introduced by more casual lodgers, attention is directed to this aspect in the course of inspections made. are required to use insecticides with a residual toxicity as a routine and lodgers are encouraged to attend the Department's clinic at Mons for personal cleansing and disinfection of their clothing. 269 such tr were given compared with 317 during the previous year.

Caravan dwellings.

The unauthorised use of land in various parts of the City by dwellers, more especially of the nomadic type, continued to create i conditions on the sites and to cause numerous complaints from res the vicinity.

452 inspections were made and in many cases verbal cautions by i resulted in the removal of the offenders but, in 54 cases, it was nec serve nuisance abatement notices; in 16 cases, including 3 from 19 proceedings ensued.

rence was made in last year's report to the refusal of an application ection 269 of the Public Health Act to allow the use of land for a site able dwellings and to deferment of the institution of legal proceedings riod of six months to allow the van dwellers to secure other accom-n; in this respect an application for an extension of the period was and legal proceedings resulted in the owner of the land and four dwellers still on the land being fined £1 each whilst summonses against dwellers who had left the site were adjourned *sine die*. Subsequently, er again unsuccessfully applied for a licence to use this land for a site able dwellings. Further legal proceedings are pending because the site n use.

oats.

supervision of canal boats used as dwellings and for the conveyance of secured under the provisions of the Public Health Act, 1936, and the oat Regulations of 1878. The number of inspections was 608 and the tandard was found to satisfy the requirements of the regulations made rters of a century ago. Only 5 infringements, affecting 4 boats, were and notices have been served in these cases. The infringements o absence of certificates, marking and painting.

new boat, motor propelled, was registered during the year and there 199 boats registered, 13 of which are propelled by oil motor, the r being horse drawn.

ugh the Manchester canal carrying companies do not allow women ren on their boats, if other canal boats in which women and children each the canals within the City, the occupiers are advised as to the ervices available.

OCCUPATIONAL CONDITIONS.

ries Act, 1937—inspections of mechanical and non-mechanical factories, etc.

Premises	Number on register	Inspections	Number of written notices	Occupiers prosecuted
es in which Sections 1, 2, 3, d 6 are to be enforced by authorities	543	104	4	—
es not included in (i) in Section 7 is enforced by the authority	4922	2384	20	—
premises in which Section 7 enforced by the local ority (excluding outwork-remises)	40	64	1	—
Total	5505	2552	25	—

Cases in which defects were found.

Particulars	Defects			
	Found	Remedied	Referred to H.M. Inspector	By H.M. Inspector
Want of cleanliness (Section 1)	11	5	—	11
Overcrowding (Section 2)	—	—	—	—
Unreasonable temperature (Section 3) ..	1	—	—	—
Inadequate ventilation (Section 4).. ..	—	—	—	—
Ineffective drainage of floors (Section 6)	—	—	—	—
Sanitary conveniences (Section 7).. ..				
(*a*) Insufficient	11	3	—	10
(*b*) Unsuitable or defective..	221	166*	—	179
(*c*) Not separate for sexes	30	34†	—	22
Other offences against the Act (not including offences relating to outwork)	16	1	14	—
Total	290	209	14	222

* Includes 73 from previous year..
† Includes 13 from previous year.

Factory outworkers.

Premises in which certain classes of work are carried out in the homes are supervised under the provisions contained in the Factorie the Public Health Act relating to the employment of persons in unw premises and to the prevention of the spread of infectious disease.

The number of firms in the City employing homeworkers has during the year from 454 to 473 and the number of homeworkers f to 3069 of whom 2155 are resident within the City. The remainin outside the City boundaries and notifications of this employment h sent to the local authorities concerned. There are also the hon employed by firms situate in other districts who carry on homewor homes in Manchester. The increase in the number of outworkers in the clothing trade in which approximately 70 per cent. of the outw engaged, and, to a lesser degree, in the household linen and soft f trades.

Inspections of outworkers homes carried out by female inspectors in general, a high standard of cleanliness; the need for cautiona arising in only 8 cases where unwholesome conditions were found w subsequently remedied. Sanitary defects in 10 homes were attende the issue of informal or statutory notices upon the owners concerned

In two cases where notifiable infectious disease occurred, the suspended until all risk of spread of infection had been eliminated.

The occupiers of 31 factories failed to keep proper records of hom names and addresses as required by the Act, but the omissions w quently remedied as a result of informal action.

nd employment of young persons.

3 visits were made by the sanitary inspectors in connection with the ration of the provisions of the Shops Act, 1950, and the Employment g Persons Act, 1938. Except for the closing of shops in the evening Sundays, which is dealt with by the Chief Constable, all the remaining ns are delegated to the Department.

mal action secured prompt attention to the provision of the prescribed to assistants' weekly half-holidays in 19 instances, hours of employment persons in 7 and as to seats for female shop assistants at 13 shops.

ar action was necessary in regard to 6 shops where the ventilation was nt and 3 where a sufficient temperature was not being maintained. vas also taken in regard to 13 shops where the washing facilities were te, at 8 shops where the sanitary conveniences were unsatisfactory and o where assistants were required to take their meals on the premises able facilities were not provided. In each case, the omissions or ies were rectified without recourse to statutory proceedings.

gements regarding heating in 1 shop, washing facilities in 2 shops and for meals in another, outstanding from 1952, were also remedied.

ption from compulsory closing on Sundays was sought by and granted ons observing the Jewish Sabbath and one registration was cancelled— now 283 persons so registered with the Department under the s of Section 53 of the Shops Act, 1950.

cations for Certificates of Exemption from compulsory half-day ere granted in respect of 4 exhibitions, the retail trade being subsidiary ry to the main purpose of the exhibitions.

Section 8 of the Young Persons (Employment) Act, 1938, 1 firm hat the provisions of the Shops Act, 1950, shall apply to all young n their employment.

g the year, the Home Office issued draft proposals for extensive n legislation dealing with the closing hours of shops, half-day closing ants' weekly half-holidays which closely follow the recommendations overnment Committee of Enquiry on Closing Hours of Shops issued 1947. Earlier suggestions of the Home Office to deal with the health, d welfare of non-industrial workers involving new legislation and nts to the existing Shops Act had also generally recognised ndations contained in the Report of a Committee of Enquiry issued in 49, and during the year have been the subject of detailed consideration s interested organisations.

nentation of these proposals, with especial regard to the control of ditions will entail a considerable expansion of the responsibilities ocal authorities and their sanitary inspectors but the Home Secretary ated that immediate enactment of the suggested legislation is not ted.

GENERAL SANITARY CONDITIONS.

Infectious diseases and food poisoning.

Following notification to the Department of outbreaks of infectious investigations were made by the district sanitary inspectors into the acute encephalitis, acute poliomyelitis, cerebro-spinal fever, dip dysentery, erysipelas and scarlet fever.

1,865 visits were required in 1,664 cases notified in the different ward City and enquiries were made to establish the source of the infection isolation, to trace contacts, to prevent the spread of infection v (including milk and ice cream) or other media, and to make arrangem the treatment of articles exposed to infection.

747 visits by the inspectors were also necessary to trace persons w been in contact with infectious diseases including 606 contacts with s patients.

Investigations by specialist sanitary inspectors were made in co with 40 outbreaks of food poisoning. The results are listed in a statement in the section of the report dealing with Epidemiology.

It is noteworthy to record that there has been a further reductio incidence of food poisoning and that 25 of the outbreaks were con single cases whilst the remaining 15 involved 2 or more persons.

How far the reduction in the number of outbreaks can be attri the continuing campaign for hygiene in the handling and preparation cannot be accurately assessed but the portents are encouraging.

Rodent Control.

The provisions of the Prevention of Damage by Pests Act, 1949 that every local authority shall ensure as far as may be practicable administrative area is kept free from rats and mice. For that purpos operatives are employed under the supervision of the executive office assistant to investigate notifications or complaints in addition to ma a continuous survey of the City.

Owners and occupiers of " land " are required to notify any su infestations to the local authority and are responsible for any en measures required on their land; similarly, the local authority is re for the repression of rodents on " land " in its own occupation.

Complaints of infestation.

2,800 new complaints were received concerning suspected infesta increase of 516 (22.5 per cent.) on the number received in 1952. considered, however, that this increase in complaints indicates a increase in the infestation of the City, which is still found to be great more central oldest areas with most dilapidated property and c associated drainage defects. The demolition of individual properti most frequently in such areas and may be of some significance to i of neighbouring premises, but there is no evidence that these demol a major factor. Clearly, however, the greater awareness of the pub service available from the Department is most relevant to the in complaints received by the Department and is invaluable in secu application of eradicatory measures at the most important stage, first onset of any infestation from whatever source.

,522 premises (7,620 dwelling-houses and 3,902 business premises) were
l on complaints of infestation being received and infestation by rats was
at 1,733 premises (1,170 dwelling-houses and 563 business premises)
mice at 2,262 premises (1,411 dwelling-houses and 851 business premises).
festation was of a major character. The precise nature of the premises
ned is indicated below :—

Nature of premises infested.

Type of premises	Number of premises				
	Rat infested			Mice infested	Totals
	Internal	External	Total		
g-houses	540	630	1,170	1,423	2,593
s, workshops, workplaces	165	14	179	151	330
.. ..	87	19	106	176	282
s where food is prepared, sold or l	44	5	49	77	126
uses	72	4	76	95	171
.. ..	20	3	23	124	147
ants, licensed premises, clubs ..	33	9	42	37	79
s, welfare centres, public insti-s	9	2	11	47	58
.. ..	18	1	19	113	132
s	2	3	5	7	12
wooden structures	11	6	17	—	17
, theatres, public halls	3	—	3	6	9
disposal works, slaughterhouses, s	2	—	2	—	2
.. ..	1	—	1	3	4
.. ..	—	26	26	1	27
.. ..	—	2	2	—	2
ion	—	—	—	1	1
.. ..	1	—	1	1	2
roperty	1	—	1	—	1
Totals	1,009	724	1,733	2,262	3,995

of the City.

accordance with the requirements of the Ministry of Agriculture and
es, Infestation Control Division, the survey of the City continued with
ect of dealing with otherwise undisclosed infestations. 30,399 premises
isited in the course of such survey. Where infestations were found
riate eradicatory measures were applied.

Causes of infestation.

Whilst the presence of rodents, especially rats, may be due to num different causes, the main sources of infestation in the built-up areas of the are sewers and drains. The implications of defective drainage allowing egr rats are of course emphasised when such conditions are associated with tural defects of premises such as missing or broken basement windo floor space ventilators and short doors.

Considerable work is commonly entailed in the tracing of drainage so of infestation and the necessary repair or renewal of defective drains or s Where sewers under the control of the City Surveyor's Department are inv the active co-operation of the divisional engineers of that Department is r obtained; otherwise the conditions are dealt with either by owners or occ of premises concerned on representation from the Sanitary Services Di or by that Division at the expense of the owners.

Classification of causes of rat infestation in premises primarily visited during

Cause	Rat-infestation				Total premises rat-infested	Percentage of total rat-infested
	Internal		External			
	Business premises	Dwelling-houses	Business premises	Dwelling-houses		
Directly due to or associated with defective or disused drains or sewers	27	57	24	229	337	19.50
Nature of business in premises or vicinity	94	6	25	1	126	7.27
Tips, refuse accumulations, market areas	12	15	4	17	48	2.76
Neglect in protecting food and food scraps	278	360	25	186	849	48.98
Poultry kept	—	—	1	15	16	.92
Dilapidated premises, defects in structure	43	40	2	19	104	6.00
Building operations, demolitions	3	—	1	2	6	.34
Vicinity of open or culverted watercourses	1	3	1	9	14	.80
Railway sidings	—	1	—	—	1	.05
Casual infestation	11	58	11	152	232	13.38
Totals	469	540	94	630	1,733	100.00

Tracing of rat burrows in relation to drainage infestation.

ditions found and action taken as a result of examinations	By City Surveyor	By owners and occupiers	By Sanitary Services Division	Totals
er of examinations made	150	81	38	269
reconstructed	3	—	—	3
defects in sewers repaired	78	—	—	78
d privy-midden drains removed	32	23	—	55
disused drains or sewers removed or rwise dealt with	34	—	7	41
ve drains remedied..	14	36	28	78
ve drains and sewers repaired by Cor- tion at owner's expense..	7	—	10	17
drain inlets repaired	13	—	—	13
rd burrows consolidated	31	6	—	37
burrows consolidated	19	15	3	37
nining found to be due to causes other rats	16	1	—	17
Totals	247	81	48	376

ination service of the Department.

ne service available from the Department is increasingly known and used rners and occupiers of infested premises. No charge is made in respect of ng-houses but, in accordance with the requirements of the Ministry, the treatment is undertaken at business premises at the request of rs or occupiers, the cost, based on the operator's time and material used, overed from the persons so concerned. 2,971 treatments (representing rease of 39.8 per cent. on the year 1952) were effected, as follows:—

952 (32.4 per cent.) for rat infestation, and
2,019 (67.6 per cent.) for mice:
2,817 treatments were by poisoning (including " Warfarin ");
59 by a combination of poisons and trapping;
93 by trapping alone;
2 by gassing.

the course of these treatments 173,332 baits were laid: 50,906 of these poison baits of which 27,319 (53.5 per cent.) were taken.

Number of dead rats picked up	1,105
Number of dead mice picked up	4,368
Estimated kill (based on poison baits taken)	36,088

Extermination by private operating companies.

Numerous operating companies undertake the treatment of some in premises under contract with owners and occupiers. These compani under no obligation to notify the Department of the results of their treat and it is not possible to estimate the number of rodents so destroyed.

Extermination by other Corporation departments and nationalised undertaking

Other departments of the Corporation and nationalised undertaking with infestation of their particular premises and reports received indicat during the year, a total of 609 poison baits were laid, of which 415 were Whilst the actual number of rodents killed by these and additional me adopted, trapping, etc., by such authorities, cannot be computed accu it is known that 755 dead rats were picked up.

Extermination of rats in public sewers.

This work is carried out by a special staff of the City Surveyor's Depa which undertakes a baiting routine of the sewers.

Particulars of the work done during 1953 is tabulated below.

Treatment	Number of manholes test baited	Number of manholes baited	Numb manholes bait t
Balance of initial treatment—No. 2 maintenance	—	869	
Test bait	2 840	—	3
No. 1 maintenance treatment	—	8,998	1,0
No. 2 maintenance treatment	—	3,374	6
Totals	2,840	13,241	2,1

Re-visits to treated premises.

Frequent visits are made to check the efficiency of the work carried premises where infestations have been discovered and appropriate m have been taken. These re-visits continue until there is no further evidence of infestation. 7,056 re-visits were made by the operators to premises. 5,165 of such premises were found to have been cleared of i This total includes the 2,078 premises cleared by Corporation treatme remainder having been dealt with satisfactorily by occupiers or o companies.

In addition to the above re-visits an average of 5 visits are involve carrying out of treatment and, to complete 2,971 treatments during t 14,865 such visits were made.

ication of insect pests.

n the course of inspections in proposed clearance areas, 481 houses were d to be infested with bed bugs, whilst the tenants of 158 other privately- d houses in the city were also advised as to the application of suitable ures to deal with similar infestations. 123 houses, owned by the oration, were found to be so infested and disinfestation of such houses ndertaken by the Housing Department by the use of D.D.T. solution. Housing Department also found it necessary to disinfest the furniture, etc., 3 families allocated to Corporation houses.

addition to bedbug infestations, information was sought on the fication and control of houseflies and blowflies, biting flies (especially uitoes), parasitic insects (lice, fleas), food pests (cockroaches, crickets arious forms attacking stored food) and fabric pests (clothes moths and t beetles). Rare or unusual species were referred to the entomologist e Manchester Museum for identification. In most cases, however, the s encountered have been readily identified by the sanitary inspectors ave advised the application of appropriate eradicatory measures.

one instance, insects (dermestidae and blow flies) from a common source causing a nuisance to a neighbouring firm and occupants of dwelling s in the vicinity. This resulted in an injunction being sought by one of omplainants. At the hearing, the sanitary inspector who had been ened to attend was questioned on the identification, life history, and ol of the insects. This was given to the satisfaction of the Recorder and ounsel engaged.

age works (defects and repairs).

nation of drains.

uthority to examine drainage systems is contained in Section 48 of the Health Act, 1936, and the procedure to be followed to obtain entry to ses is prescribed in Section 287 of the Act. By this procedure it is the ce of the Department to ensure that occupiers at premises are given at 24 hours written notice of the Corporation's intention to examine the at the specified premises.

uring the year, the drains at 181 premises were examined; 132 were formal nations, the remainder being informal by agreement with the owners cupiers of the premises. Defective drains were found at 174 of the ses and statutory notices were served under Section 39 of the Act ving the repairs required at 163 of the premises, repairs being carried out arily at a further 8 of the premises whilst the 3 remaining cases were ed for action by the City Surveyor's Department.

e need for the examination frequently followed complaints arising from ations of water or drainage liquid into floor cavities, cellars, basement etc., subsidences and settlement of flagged or paved surfaces of cellars, paths, passages, offensive effluvia in or around premises, evidence of rat ving in premises and stopped drains.

drains and sewers.

der provisions of the Public Health Act, 1936, extended by the ester Corporation Acts 1946 and 1950, the Medical Officer of Health itary Inspector is empowered to serve a notice requiring attention within rs to choked drains, etc., and in this manner there is the minimum delay ring attention to very objectionable conditions causing serious nuisance

and inconvenience. Similarly, if immediate action is necessary, stoppag lengths of public sewers can be summarily dealt with. Defective lengt public sewers not needing such urgent action are the subject of formal n served upon the owners of the premises concerned.

These provisions have removed delay associated with normal proc under the Public Health Act, 1936, and have been used with effect justified. 564 notices were served for stopped drains at 576 premises 151 reports were made for immediate action in connection with stopp public sewers affecting 578 premises during the year. There was no crit from the owners of properties regarding the summary action taken in conn with the stopped drains or public sewers.

The expenditure so incurred is recoverable by the Corporation ar some instances, the owners of premises served by defective lengths of p sewers were not aware of their liability for the cost of the work exe In all these cases, however, the explanations given satisfied the owners conc

Sanitary accommodation.

There are 372 (approximately 0.15 per cent.) premises in the City, n in the Wythenshawe area, where the closet accommodation is not o water carriage system. The majority of these premises have no sewer wi reasonable distance whilst others are situated in potential clearance area

The continued development of Wythenshawe and the resumption clearance of unfit houses virtually will secure the abolition of this obsol form of convenience in the City.

Conversions or demolitions have taken place at 29 premises an Department is in communication with owners of several other dwelling h where sewers have become available, with a view to the replacement o closets by waterclosets.

When temporary conveniences are required for employees engag building operations, where the installation of water-closets is not pract pailclosets are provided and are subject to approval by the Department arrangements are made by the Cleansing Department for collectio renewal of pails. Subsequently, they are subject to supervision to compliance with departmental requirements.

A considerable number of conveniences together with wash-hand b baths, sinks, etc., are installed each year in existing premises to compl the provisions of the Factories, Public Health, and Shops Acts and B or voluntarily to improve existing accommodation. Plans and particul 39 schemes were submitted and approved during the year, an Corporation's requirements observed.

Tipping of refuse.

36 privately owned sites were in use, some intermittently, for the d of trade refuse and building debris of an inorganic nature and were visi the district sanitary inspectors to prevent nuisance arising. This surve was particularly necessary at sites used intermittently which appeared more liable to indiscriminate dumping of refuse by unknown persons.

At one disused colliery tip, the National Coal Board maintained spraying to deal with a deep-seated fire previously reported in 1952. measures adopted, whilst not extinguishing combustion, kept the co under control and prevented nuisance arising.

The refuse collected by the Cleansing Department amounted to 199,726 of which controlled tipping disposed of 150,636 tons, the remainder being with by separation and incineration. 3 sites in the northern area of the and 1 in the southern area were in use for that purpose, and close peration was maintained with the Cleansing Department to ensure rvance of prescribed precautions against nuisance occurring.

nsive trades.

The following trades prescribed as "offensive trades" under the provisions e Public Health Act, 1936, and the Manchester Order of 1921, were carried t 57 registered premises in the City: 1 blood albumen maker, 3 bone ire and size manufacturers, 2 fat melters, 2 fish curers, 1 fish curer and e manufacturer, 1 gut scraper, 1 oil distiller, 2 pickle and sauce ufacturers, 21 rag and bone dealers, 7 rubber spreaders, 3 rubber substitute ders, 1 size maker, 2 soap boilers, 2 tallow melters, 3 tanners and 5 tripe rs and dressers.

aving regard to the risk of nuisance arising from the particular nature of businesses, most being concerned with the treatment of organic matter, supervision was exercised over the trades. Co-operation was also ained with the City Surveyor to ensure that the Department was made of applications under town planning provisions in respect of any osed establishment of such trades.

atutory action under the Public Health Act was necessary, in one nce, to deal with nuisance from the storage and treatment of animal matter long-established business, and a nuisance order was made by the City trates' Court. Considerable work continues on alterations to the premises quipment.

ne application for consent to establish the trade or business of "rag and dealer," as defined in the Manchester Order, 1921, was refused because unsuitability of the particular premises.

oceedings pending from 1952 in respect of other premises at which rag one dealing was being carried on without the necessary consent of the ration were resolved on the cessation of the business.

ium nuisances.

pections were made on complaints of effluvium nuisances involving ndoor and outdoor sources.

isances from indoor sources generally, were speedily remedied because relative ease of discovery and removal of causes which included dead s, defective drainage and faulty electric wiring affecting plastic fittings.

tdoor sources, often in the immediate vicinity of the complainants' es, e.g., fumes from restaurant kitchens, usually were similarly readily vith by securing proper disposal of the exhaust ventilation from the ns concerned, without the necessity for formal action.

Other outdoor sources of effluvium nuisance had more extensive im
tions associated with trade processes discharging fumes into the atmosp
in one instance from carbon di-sulphide by reason of a breakdown c
plant concerned. In this occurrence, the rather exceptional circumst
enabled prompt identification of the nature and source of the nuisan
the sanitary inspector and correspondingly prompt remedy. The Depar
is concerned, however, with complaints of pungent, though less odorous
generally intermittent emissions, the particular origins of which hav
always been identifiable amongst numerous potential sources in the indu
areas concerned. In this regard, the Department maintains close contac
the Inspector of the Ministry of Housing and Local Government w
responsible for the administration of the Alkali, etc., Works Regulation

Noise.

Complaints continued to be received alleging nuisance from noise
industrial, trade or other sources including dwelling houses.

It was evident, however, that the precise nature of the Department's p
concerning a noise nuisance were not fully appreciated by some complai
Thus, in accordance with the provisions of Section 40 of the Manc
Corporation Act, 1946, dealing with such a nuisance, it must be estab
that the noise is excessive, unreasonable or unnecessary and is injuric
dangerous to health. In addition, in respect of a noise nuisance fro
trade, business or occupation, a valid defence is available that th
practicable means are being taken to prevent or mitigate the nuisance
regard to the cost and other relevant circumstances.

Most of the complaints were directed against noises occurring late a
or early in the morning and, whilst some arose from genuine annoy
others were found to be more a matter of disputes between neighbour
public grievances. Otherwise, the investigations frequently neces
repeated day and night visits by inspectors to determine whether the con
required action by the Department or to check the outcome of undert
given to deal with the noise sources.

When regard is had, however, to the density and pattern of the develc
of the City and the numerous points of potential irritation if not acti
nuisance, the over-all incidence of complaints was small. 42 different s
of noise were involved in complaints received and included dairy and bak
operations, various types of machinery, refrigerators, amplified music,
electricity generators, and the loading and unloading of goods.

One rather unusual source of noise, affecting residents in the vicini
works, was that of an experimental plant testing the suitability of d
grades of conveyor belts with the object of manufacturing a belt fa
sufficient durability with an essential requirement that there should
absolute minimum of heat production from friction. This involved prol
continuous operation, day and night, under conditions simulating those
purpose for which the conveyor was intended and produced considerabl
which caused a nuisance. Informal representations, made by the inspe
the firm concerned, secured active co-operation and, although subs
alterations were required, these were carried out without delay and the nu
abated.

2 instances where noise arising from amplified music and diesel electricity ors at fairs in close proximity to dwelling-houses caused a nuisance, necessary to serve abatement notices on the proprietors following which sance was abated. In another instance, 3 aggrieved householders were a Nuisance Order by the Magistrates' Court with a similar result.

sed by pleasure fairs.

owing post-war experience of the use of unsuitable sites by pleasure specially in close proximity to dwellinghouses, e.g. on blitzed sites in ed parts of the City, discussion has continued between representatives Corporation and of the Showmen's Guild with the object of allowing certain parks or recreation grounds conditionally to be used by pleasure bject to members of the Guild not using sites elsewhere in the City the consent of the Corporation.

ar as the Department is concerned, complaints as to some pleasure privately owned land have dealt in particular with excessive noise ed into late hours of the night or until early morning. In 2 instances ecessary for the Department to take statutory action under Part III of lic Health Act, 1936, and Section 40 of the Manchester Corporation 46, in respect of noise nuisance as indicated elsewhere in this report.

ck and other filling materials.

experience of the Department in the operation of the Rag Flock and lling Materials Act, and Regulations of 1951, requiring the use of clean ed filling materials in upholstered and other articles which are stuffed , demonstrated some enforcement weaknesses and suggested remedies ere the subject of observations by the Town Clerk to the Association icipal Corporations during the year.

e proposals were not directed to alter existing policy expressed in the to enable it to be carried out more effectively and were adopted by the ion for submission to the Ministry of Housing and Local Government. oposed 5 amendments, viz:

t giving a false warranty should be an offence;

ser relying on the defence of warranty should be required to prove t he asked for clean material;

ne doubt as to whether the Local Authority has power to proceed inst "some other person" after, having proceeded unsuccessfully inst the original defendant, should be removed by clearly giving that wer;

prosecutor should have the option of taking proceedings before a rt having jurisdiction where the sample was taken and found not to clean, or where the offence was committed; and that

nd-hand upholstered articles should be clearly marked "Second-d."

remises are registered under the requirements of the Act as being where designated filling materials are used in the manufacture of 59), upholstery (33), soft toys (7), cushions (2) and baby carriages (1). istrations were made during the year.

nises are now licensed for the storage of rag flock for distribution to premises, the storage at one premises being discontinued during here are no manufacturers of rag flock within the City.

363 visits were made to premises and 51 samples of designated materials were taken and submitted to prescribed analysts for examina accordance with the Regulations. In 2 instances, involving straw and flock filling respectively, legal proceedings were instituted and fines of £ £3 and costs were imposed in each case. In a third case, dealing with filling found to contain an excess of "trash", proceedings are pending.

Legal proceedings were also instituted arising from a sample of taken during 1952 and found to contain an excess of "trash." The su were fined £3 and costs.

The irregularity of a sample of feathers and another of cotton felt w minor nature and the firms concerned were cautioned.

Export of washed rags and second-hand clothing.

As a public health measure, most importing countries abroad now certification of cleanliness before accepting second-hand and similar m It is customary for one of the following treatments to be applied ac to the particular materials involved:—

(*a*) washed and sterilised by boiling in caustic soda solution;
(*b*) high pressure steam disinfection;
(*c*) formalin disinfection;
(*d*) soakage for 40 days in strong lime and sodium sulphide solut

Inspections were made and certificates issued as follows:—

Articles	Bales or bundles	Co
Washed rags	303	Vene
	106	S. A
	10	Cana
	10	Eire
	4	Aden
	45	Spai
	1	New
Second-hand clothing	17	Eire
	3	Turk
	46	Rho
	23	Hun
	20	Gree
	1	Sier
	440	S. A
Picker waste (treated hides)	10 tons	Japa

Exchange of toys for rags.

The provisions of Section 154 of the Public Health Act, 1936, re collectors or dealers liable to proceedings if they sell or deliver articles or drink to any person, or any article whatsoever to a person under of age, whilst dealing or collecting rags or old clothes. This precl exchange of toys for rags.

No contraventions of the Section were reported during the year.

nming baths.

There were 21 swimming baths in use in Manchester during 1953 and 16 em were available for the general public, including 1 outdoor bath privately ed. Each is equipped with mechanical filtration and chlorination plant.

During the year the Corporation increased their number of pools in mission to 14, by re-opening 1 at Hulme.

he remaining indoor baths were maintained at the University, 2 schools oys, a young men's physical training and recreational centre and a licensed lishment for massage or special treatment where swimming instruction is provided.

ll the baths were visited to ensure that the recommended standards of the stry of Health relating to the cleanliness of the water were observed. les of the bath water were obtained, at each visit, for bacteriological ination and tests were made at the time of sampling to ascertain whether otential-hydrogen (pH) value and chlorine content were at a standard nensurate with effective filtration and sterilisation.

uring the year, an investigation by the Public Health Laboratory Service with baths in the areas of different local authorities, including Manchester, ich continuous filtration and chlorination plant was used, and a report sued on suitable standards for the bacteriological control of the bath water. uggested that no sample should contain any coliform organisms in 100 ml. ter; in 75 per cent. of the samples, the plate count at 37°C. from 1 ml. ter should not exceed 10 colonies; and, in the remainder, 100 colonies l not be exceeded. Further, concerning the chlorination of the water, port reaffirmed the earlier recommendation of the Ministry of Health that l of 0.2 to 0.5 p.p.m. of free residual chlorine should be secured to ain the water in a bacteriologically satisfactory condition.

assessing the efficiency of the treatment of swimming bath water in nester, the Department has previously applied such standards coupled ne pH value of the water, and the informed co-operation of the manage- concerned has been a major factor ensuring the efficient use of the available to achieve these results.

ere was only 1 adverse report on samples obtained by the Department that instance a temporary mechanical failure of the plant was responsible. as promptly remedied and an early revisit for repeat samples and tests d satisfactory conditions.

shments for massage or special treatment.

Department continued to administer Part IX of the Manchester ation Act, 1924, and the byelaws made thereunder in 1925, which for the licensing and conduct of establishments for massage or special nt in Manchester.

treatment mainly afforded in such establishments is chiropody and, to lesser degree, physiotherapy.

erally, hospitals and establishments, where treatment is free, are excluded ne provisions of the Act.

re were 95 licences issued to carry on establishments for massage or treatment in 1953, including 90 renewals and 1 transfer. The 4 new granted were for chiropody treatment only.

2 unlicensed chiropody establishments were found during the ye the persons concerned, when informed of the necessity for li immediately made application. These, however, were refused Corporation as the applicants did not possess such technical qualifica are considered reasonably necessary.

1 applicant appealed to a court of summary jurisdiction against the C tion's decision but withdrew his appeal before the hearing.

Hairdressers or barbers.

655 persons and their premises where this trade or business is carrie registered under the provisions of Section 42 of the Manchester Cor Act, 1946, and byelaws are in operation concerned with the cleanlines persons employed, the equipment used and the premises.

The district sanitary inspectors regularly visit premises regard requirements of the Act and byelaws and the majority of registered were found to be in a satisfactory condition whilst there was co improvement in the general standards of hygiene. It was necessary, h to issue cautions regarding unsatisfactory repair, cleanliness and un practices in 25 instances. Satisfactory circumstances were reported o quent visits and in no case was it necessary to institute legal proceeding

Following verbal cautions to several unregistered persons carryi hairdressing business on unregistered premises, applications for reg were received. Byelaw standards and requirements were being obs each case, but where the business was being conducted in dwelling ho circumstances were reported to the Town Planning Section of Surveyor's Department and also to the Director of Housing when n houses were concerned.

Sale of certain poisons.

The retail sale of poisons by traders who are not registered ph is controlled by the Pharmacy and Poisons Act, 1933, and the Poiso A poisons list has been prepared and confirmed by the Home Secreta list is in two parts. The Part II list prescribed the poisons which ma by ordinary traders in addition to pharmacists.

Persons who sell Part II poisons are required to make applicatio Corporation to be entered on a list of persons entitled to sell such and to comply with the provisions of the Act and rules.

The number of sellers of Part II poisons on the list for the year w a reduction of 54 as compared with the previous year. This total 180 new retailers, 234 listed persons having discontinued the sa poisons. Listing and renewal fees amounted to £328 11s. 0d.

The Part II poisons are mainly disinfectants and their co insecticides, fungicides, rodenticides, household cleaning agents, hai others sold chiefly at grocers, hardware dealers, seedsmen, agricultural florists, herbalists and hairdressers. Certain of the poisons (specified i schedule of the Poisons Rules) such as arsenical compounds, nic mercuric chloride, because of their more dangerous nature are su more strict control. These poisons are limited as to the form in w may be sold by an ordinary trader and they may only be sold by the li or a named deputy. Prescribed records must be kept of all these sales, particulars of the person purchasing and of the purpose for wh purchased.

e general requirements to be observed in connection with the sale of l poisons are supervised by the district sanitary inspectors, particular on being directed to the keeping of prescribed records as to sales, ng, storage facilities and types of containers used. During the year, it was ary to caution 13 retailers selling Part II poisons without complying with rmalities required.

mortuaries.

e 4 public mortuaries and associated post-mortem rooms are under rection of the Watch Committee and, with the co-operation of the Constable, a survey was made of the facilities and structural arrangements special regard to the maintenance of hygienic conditions.

sing from the investigations, works of improvement, directed to items ng equipment, hot and cold water supply, drainage and ventilation, ndertaken.

ations.

h the object of ensuring that due care and attention to public health cency were observed as required by licences issued by the Home Office exhumation of human remains, district sanitary inspectors attended exhumations. In 4 instances the remains were immediately re-interred es in the same cemeteries, whilst in the other instance they were red to another cemetery outside the City.

ddition, arising from re-development of land containing a disused round, similar attendances were made in connection with the exhumation emains of 40 persons and re-interment in another cemetery.

PUBLIC CONVENIENCES.

conveniences under the control of the Health Committee at the end ear numbered 158 and provide the following accommodation:

—

h urinal, watercloset, washing and parcel storage accommodation	5
h urinal, watercloset and washing accommodation	10
h urinal and watercloset accommodation	39
h urinal accommodation	61
	115

s—

h watercloset, washing and parcel storage accommodation	4
h watercloset and washing accommodation	6
n watercloset accommodation	33
	43

ne conveniences with watercloset accommodation, 1 compartment is free of charge.

w convenience for females in Cannon Street was opened to the public , 1953, and new conveniences for both sexes have been in use at , East Didsbury, since July, 1953. A pleasing feature has been the small amount of wanton damage at this convenience which is in contrast to the misuse which persisted at numerous surburban nces.

11 surburban conveniences suffered misuse and damage which, ap the cost of repairs involved, also, frequently deprived the public of th until the work could be carried out. Some of the damage result attempts to steal washbasins, whilst it does seem that another cause of des of washbasins was that of youths climbing on to them. It has been im to cope with the theft of plugs and chains from washbowls and the p of paper towels and liquid soap has had to be discontinued because of

The building work on the new conveniences at Ashton Old R Ogden Lane, Higher Openshaw, has proceeded, but there was dela work at Mundy Street, Stockport Road, Longsight, pending special c tion of the particular circumstances.

At Kingsway–Mauldeth Road, Burnage, a site was obtained for the p of conveniences for both sexes of similar design to those at East Didsb the building work is due to be commenced in 1954.

The Committee's proposal to provide facilities in Burton Road, Wi has been delayed because of protracted negotiations regarding the site early start is anticipated.

The need to increase the conveniences at Piccadilly has again rec attention of the Committee and financial provision has been include estimates for the year 1954–55 with a view to undertaking the work.

A mobile steam cleaner, which has been obtained for the clea conveniences, has proved very effective in attaining a higher stan cleanliness by using steam under pressure than hitherto secured by and hosing with cold water.

Urinals at the following locations have been modernised:

Adjoining 915 Ashton Old Road, Openshaw.
Adjoining Crown Hotel, Fairfield Street, Ardwick.
Adjoining Didsbury Hotel.
Adjoining Wellington Hotel, Didsbury.
St. Saviours, Plymouth Grove, Chorlton-on-Medlo
Pollard Street, Ancoats.

The following urinals, which were of an obsolete type, had redundant and have been closed:

Clayton Lane South, Openshaw.
On Canal Bridge, Union Street, Ancoats.

REPORT OF THE PUBLIC ANALYST.

A. N. Leather, B.Sc., F.R.I.C.

e presentation of another annual report gives me an opportunity, which ery glad to take, of expressing my appreciation of the loyal services of oratory staff, and of thanking sampling officers and other members of ff of the Health Department for their willing co-operation.

ring the year, Food Standards Orders in respect of preserves, ice cream ccharin tablets were varied. The Public Health (Preservatives, etc., in Order was amended by extending the schedule of foods in which atives are permitted. A new Order, the Artificial Sweeteners in Food forbids the use of substances other than saccharin.

Ministry of Food discontinued the Advisory Service which had been ed within the framework of the Food Standards and Labelling Division Ministry, and during the year it became evident that the Food and Authorities (such as Manchester), who already had the responsibility rcing the Labelling of Food Order, would also find themselves called s advisers to assist labellers in complying with the requirements of the

he year's total of samples submitted under the Food and Drugs Act ated Acts and Regulations, the proportion of samples found to tisfactory was 6.1 per cent. In this connection "unsatisfactory" "adulterated or otherwise giving rise to irregularity." Later in this ome comments are made on the meaning of adulteration statistics.

notes recording the action taken on unsatisfactory samples are based mation provided by the Sanitary Services Division of the Department.

able 1 are set out the samples examined under the Food and Drugs l related Acts and Regulations, and those found to be unsatis- Tables 2 and 3 give the average composition of milk for the four and for the whole year.

Table 1.

Food and Drugs Act, 1938.

Summary of samples examined.

Article	Number examined				Number adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Private	Total	Formal	Informal	Private
Milk*	689	629	—	1,318	143	47	—
Milk (sterilised)	143	40	—	183	—	—	—
Ice cream	23	10	—	33	—	—	—
Ice-lollies	—	36	—	36	—	—	—
Ice-lolly syrups	—	9	—	9	—	—	—
Alcoholic liquids—spirits	19	—	—	19	—	—	—
wine cocktails	5	—	—	5	—	—	—
wines	12	—	—	12	—	—	—
others	17	34	—	51	—	—	—
Arrowroot	—	2	—	2	—	—	—
Bacon and ham	30	—	—	30	—	—	—
Baking and golden raising powder	—	16	—	16	—	—	—
Barley	22	—	—	22	—	—	—
Batter mixture	—	2	—	2	—	—	—
Biscuits	38	2	—	40	—	—	—
Blancmange powder	—	7	—	7	—	—	—
Bottled:—							
Beetroot	1	—	—	1	—	—	—
Fish	—	2	—	2	—	—	—
Fruit	—	3	—	3	—	—	—
Fruit juice	—	1	—	1	—	—	—
Mint jelly	—	1	—	1	—	1	—
Bread	24	12	—	36	—	2	—
Butter	37	—	—	37	—	—	—
Cake and pudding mixtures	—	20	—	20	—	2	—
Calves foot jelly	—	2	—	2	—	—	—
Canned:—							
Cream	—	10	—	10	—	2	—
Creamed rice	—	1	—	1	—	—	—
Fish	—	7	—	7	—	—	—
Fruit and fruit juice	—	9	—	9	—	—	—
Meat and meat products	—	14	—	14	—	—	—
Soup	—	20	—	20	—	—	—
Vegetables	—	36	—	36	—	—	—
Celery salt	—	4	—	4	—	—	—
Cereals (prepared)	32	1	—	33	—	—	—
Cheese	9	25	1	35	—	1	—
Chocolate spread	—	3	—	3	—	—	—
Christmas pudding	—	5	—	5	—	1	—
Cocoa	26	1	—	27	—	—	—
Coconut, desiccated	16	—	—	16	—	—	—
Coffee	34	1	—	35	—	—	—
Coffee and chicory	6	3	—	9	—	—	—
Coffee and chicory essence	—	13	—	13	—	—	—
Coffee extract (dry)	2	4	—	6	—	—	—
Cornflour	16	1	—	17	—	—	—
Custard powder	25	1	—	26	—	—	—
Dried cereal soup mixture	—	2	—	2	—	2	—
Dried fruits:—							
Vine fruits	47	—	—	47	—	—	—
Others	9	7	—	16	—	—	—
Dried herbs	—	10	—	10	—	—	—
Dried pulses	66	1	—	67	1	—	—
Dried soup	—	5	—	5	—	1	—
Dried yeast	—	2	—	2	—	—	—
Dripping	4	2	—	6	—	—	—
Energy food	—	1	—	1	—	1	—
Fish cakes	—	1	—	1	—	—	—
Fish dressing	2	3	—	5	—	—	—
Fish paste	2	2	—	4	—	—	—
Fish (prepared)	—	4	—	4	—	—	—
Flavouring	—	3	—	3	—	—	—
Flour confectionery	30	9	—	39	—	—	—
Flour, plain	13	—	—	13	—	—	—
Flour, self raising	35	—	—	35	—	—	—
Food beverage powder	4	3	—	7	—	—	—
Fruit juice	—	3	—	3	—	—	—
Gelatine	1	4	—	5	—	—	—
Golden syrup and treacle	—	18	—	18	—	—	—
Gravy browning	—	15	—	15	—	—	—
Gravy powder and gravy salt	—	10	—	10	—	—	—
Ground almonds	3	2	—	5	—	—	—
Ground mixed nuts	—	1	—	1	—	—	—

Article	Numbers examined				Numbers adulterated or otherwise giving rise to irregularity				Percentage of Samples unsatisfactory
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
	9	1	—	10	—	—	—	—	—
	5	10	—	15	—	—	—	—	—
preparations)	7	22	—	29	—	1	—	1	3·4
	—	2	—	2	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
ing fat	36	1	—	37	—	—	—	—	—
hetti and vermicelli	16	—	—	16	—	—	—	—	—
	35	1	—	36	—	—	—	—	—
	—	5	—	5	—	—	—	—	—
prepared meat	18	—	—	18	1	—	—	1	5·6
	—	4	—	4	—	—	—	—	—
	—	9	—	9	—	—	—	—	—
cooked sausage	10	—	—	10	1	—	—	1	10
	16	1	—	17	2	—	—	2	12
ls, etc.)	29	—	—	29	—	—	—	—	—
d	—	28	—	28	—	—	—	—	—
	—	3	—	3	—	—	—	—	—
ed	—	5	—	5	—	—	—	—	—
der	—	2	—	2	—	—	—	—	—
ndiment	—	9	—	9	—	—	—	—	—
	—	4	—	4	—	—	—	—	—
	10	1	—	11	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
	—	5	—	5	—	—	—	—	—
	39	6	—	45	1	—	—	1	2·2
	—	5	—	5	—	1	—	1	20
	175	3	—	178	2	—	—	2	1·1
	43	—	—	43	—	—	—	—	—
s	—	1	—	1	—	—	—	—	—
	12	—	—	12	—	—	—	—	—
d mayonnaise	—	14	—	14	—	—	—	—	—
	—	9	—	9	—	—	—	—	—
l	—	1	—	1	—	—	—	—	—
in tomato)	1	33	—	34	—	1	—	1	2·9
	—	9	—	9	—	—	—	—	—
	16	—	—	16	—	—	—	—	—
der	1	2	—	3	—	—	—	—	—
	38	33	—	71	—	—	—	—	—
	7	42	—	49	1	2	—	3	6·1
	2	9	—	11	—	—	—	—	—
	22	—	—	22	1	—	—	1	4·5
	50	1	—	51	—	—	—	—	—
nfectionery)	33	3	—	36	—	3	—	3	8·3
	9	—	—	9	—	—	—	—	—
	42	—	—	42	—	—	—	—	—
owder	43	3	—	46	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
foods*	2,166	1,385	1	3,552	153	68	—	221	6·2

Article	Number examined				Number adulterated or otherwise giving rise to irregularity			
	Formal	Informal	Private	Total	Formal	Informal	Private	Tot
Aspirin tablets	3	2	—	5	—	—	—	—
Bicarbonate of soda	—	3	—	3	—	—	—	—
Boracic acid	—	1	—	1	—	—	—	—
Borax	—	1	—	1	—	—	—	—
Calamine lotion	—	1	—	1	—	—	—	—
Cascara sagrada tablets	1	—	—	1	—	—	—	—
Compound codeine tablets	—	1	—	1	—	—	—	—
Compound tincture of rhubarb	1	—	—	1	—	—	—	—
Cough mixture	—	7	—	7	—	—	—	—
Cream of tartar	—	1	—	1	—	—	—	—
Epsom salts	2	2	—	4	—	—	—	—
Flowers of sulphur	—	1	—	1	—	—	—	—
Friar's balsam	—	1	—	1	—	—	—	—
Glauber's salt	3	—	—	3	—	—	—	—
Glucose beverage	1	1	—	2	—	—	—	—
Glucose with vitamin D	1	2	—	3	—	1	—	—
Glycerine	4	1	—	5	—	—	—	—
Glycerine lemon and ipecac mixture	—	1	—	1	—	—	—	—
Halibut oil and orange	—	1	—	1	—	—	—	—
Indigestion powder	—	1	—	1	—	—	—	—
Liquid extract of cascara sagrada	—	1	—	1	—	—	—	—
Liquid paraffin	3	1	—	4	—	—	—	—
Malt extract with cod liver oil	—	1	—	1	—	—	—	—
Medicated lozenges	—	1	—	1	—	1	—	—
Milk of magnesia tablets	—	2	—	2	—	—	—	—
Oil:—								
Camphorated	2	1	—	3	—	—	—	—
Castor	2	—	—	2	—	—	—	—
Neatsfoot	—	1	—	1	—	—	—	—
Olive	4	2	—	6	—	—	—	—
Olive oil and raspberry vinegar	—	2	—	2	—	—	—	—
Parrish's Chemical Food	—	1	—	1	—	—	—	—
Rose hip and orange syrup	—	2	—	2	—	—	—	—
Saline, effervescent	—	1	—	1	—	—	—	—
Sulphur and lime tablets	—	1	—	1	—	—	—	—
Syrup of squills	2	—	—	2	—	—	—	—
Tincture of iodine	—	1	—	1	—	—	—	—
Total drugs	29	46	—	75	—	2	—	
Add total foods*	2,166	1,385	1	3,552	153	68	—	2
Total food and drugs*	2,195	1,431	1	3,627	153	70	—	2
Milk (including sterilised milk)*	832	669	—	1,501	143	47	—	1

* Not including 17 " appeal to cow " samples of milk.

TABLE 2.

Composition of milk.

Quarterly average table.

Quarter	All milks				Genuine milks				Adulterated milk		
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %
First	368	8·58	3·28	11·86	290	8·69	3·39	12·08	78	8·17	2·87
Second	346	8·70	3·24	11·94	295	8·74	3·32	12·06	51	8·48	2·82
Third	409	8·78	3·52	12·30	362	8·81	3·61	12·42	47	8·57	2·73
Fourth	378	8·84	3·76	12·60	364	8·86	3·79	12·65	14	8·21	2·92

TABLE 3.

Composition of milk.

average table.

All milks -				Genuine milks				Adulterated milks			
No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
1,501	8·73	3·46	12·19	1,311	8·78	3·55	12·33	190	8·36	2·84	11·20

Adulteration of milk.

its for the composition of milk are fixed by the Sale of Milk Regulations, nder powers conferred by the Food and Drugs Act, 1938. The effects Regulations include the following: (*a*) when a sample of milk is found in less than 8.5 per cent. of non-fatty solids the presumption is raised e contrary is proved that water has been added to the milk; (*b*) when e of milk is found to contain less than 3·0 per cent. of fat the presumption until the contrary is proved that fat has been abstracted (or that water n added).

erally speaking, any sample falling to comply with these minimum returned as " adulterated or otherwise giving rise to irregularity". er practicable the Hortvet freezing-point test is applied to samples of ving non-fatty solids below 8·5 per cent. If such a sample is found to reezing-point not nearer to zero Centigrade (the freezing-point of pure han – 0·529°C. (which is regarded as the limiting value for genuine is reported as genuine, apart from any deficiency in fat. Such samples d in Table 4. Any sample listed in Table 4 is, however, returned as rated or otherwise giving rise to irregularity " if it has a fat content of n 3.0 per cent.

again clear from the experience of this laboratory that the freezing- t more often acts as a protection to an innocent vendor of poor milk ight at first sight be " presumed " to contain added water, than as a f confirming the presence of extraneous water in other samples where raneous water is independently indicated by full analysis in comparison ppeal to cow " samples.

l be seen from Table 1 that 1,318 samples of milk (excluding sterilised re examined during the year. Of 287 samples submitted under the d Dairies Regulations, and included in the above, only two were reported upon; one containing 5·8 per cent of added water and the ving a faint chlorine-like taint. In addition, 183 samples of sterilised e examined, each of which was found to be genuine.

the total number of milks received was 1,501 (excluding " appeal to mples), and 190 (or 12·6 per cent) of these were adversely reported

ese 190 samples, 64 contained added water, varying from a trace to cent, and 19 of these same 64 samples were also deficient in fat.

mples were deficient in fat only, the deficiency varying from 1·6 per 3.3 per cent, expressed as a percentage of the 3.0 per cent. presumptive .

Before a final interpretation can be placed upon the figure of 12·6 per as representing the level of milk adulteration for the year, account should taken of the number of consignments of milk involved, and in the case of deficiency the average composition of individual consignments. Thus the samples containing added water were contained in 24 consignments, one which consisted of 15 churns. The 125 samples deficient in fat were contai in 82 consignments, yet 58 of these consignments contained an average ov percentage of fat of 3.0 per cent or more. Thus, for example, the consignm which included the churn with a 33·3 per cent fat deficiency had an averag content of 3·13 per cent calculated on the whole consignment.

[In respect of 35 samples of milk summonses were issued, magistrates inflicted penalties in every instance. Fines totalled £109 with £19 2s. 7d. costs. In other appropriate cases cautions administered.]

17 " appeal to cow " samples were examined during the year. Three these samples (from different sources) contained less than 8·5 per cent non-fatty solids, the amounts being respectively 8·45, 8·35 and 8·33 per The first and third of these samples had freezing-points indicative of gen milk, and they appear at the foot of Table 4. The second sample, how had a freezing-point of – 0·524°C. (Hortvet) indicating the presence of a added water. On enquiry it was learned that milking had commenced b the arrival of the sampling officer. A further " appeal " sample from the herd three days later had a freezing-point of – 0·545°C. (Hortvet), a result within the normal range for genuine milk. Incidentally this further " app sample was found to contain more than 8·5 per cent of non-fatty solids.

TABLE 4

The following samples of milk showed figures for non-fatty solids b the presumptive limit of 8·5 per cent non-fatty solids fixed by the Sa Milk Regulations, 1939, but were adjudged genuine (apart from any defici in fat) on the Hortvet freezing-point test:—

Serial Number	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidit °Richm
502B	11·42	3·00	8·42	—0·545	16
1011C	10·97	2·55	8·42	—0·534	16
8A	11·38	3·05	8·33	—0·547	16
62A	11·32	3·10	8·22	—0·535	16
64A	11·21	3·00	8·21	—0·539	17
565B	11·06	2·70	8·36	—0·540	16
566B	10·98	2·60	8·38	—0·540	17
567B	11·12	2·80	8·32	—0·539	17
80A	11·64	3·45	8·19	—0·529	14
84A	10·95	2·90	8·05	—0·532	14
85A	11·37	3·05	8·32	—0·533	16
86A	11·38	2·95	8·43	—0·541	16
146A	11·01	2·70	8·31	—0·546	15
657B	11·49	3·00	8·49	—0·545	16
658B	11·32	2·85	8·47	—0·549	15
165A	11·44	3·00	8·44	—0·533	16
166A	11·14	2·75	8·39	—0·543	16
167A	11·28	2·90	8·38	—0·542	16
191A	11·90	3·60	8·30	—0·552	17
192A	10·83	2·70	8·13	—0·553	15
1163C	11·20	2·80	8·40	—0·539	16
1164C	10·92	2·60	8·32	—0·541	16
1165C	10·85	2·50	8·35	—0·539	16
1167C	10·89	2·50	8·39	—0·540	16
694B	11·32	3·10	8·22	—0·540	16
217A	11·09	2·95	8·14	—0·547	17
219A	11·14	3·05	8·09	—0·537	16
220A	10·90	2·65	8·25	—0·546	17
221A	11·46	3·25	8·21	—0·538	15
222A	10·96	2·80	8·16	—0·535	14
241A	12·38	4·00	8·38	—0·535	16
242A	10·82	2·55	8·27	—0·537	15
244A	10·72	2·35	8·37	—0·543	14
245A	10·82	2·55	8·27	—0·541	16

r	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidity °Richmond
	11·10	2·85	8·25	—0·545	17
	11·18	2·70	8·48	—0·533	17
	10·67	2·45	8·22	—0·536	17
	10·44	2·40	8·04	—0·537	17
	10·47	2·15	8·32	—0·538	18
	10·58	2·40	8·18	—0·536	17
	11·59	3·25	8·34	—0·545	17
	11·59	3·15	8·44	—0·532	17
	12·04	3·75	8·29	—0·541	17
	11·10	2·95	8·15	—0·539	17
	11·42	3·00	8·42	—0·546	18
	11·57	3·20	8·37	—0·532	17
	11·83	3·45	8·38	—0·539	15
	11·29	3·15	8·14	—0·541	15
	11·09	3·10	7·99	—0·534	16
	10·83	2·70	8·13	—0·539	16
	10·56	2·55	8·01	—0·529	15
	11·73	3·30	8·43	—0·548	16
	11·95	3·65	8·30	—0·541	14
	11·24	3·00	8·24	—0·543	15
	11·24	3·10	8·14	—0·540	15
	11·18	3·05	8·13	—0·541	14
	10·90	2·85	8·05	—0·540	15
	10·74	2·80	7·94	—0·539	15
	11·33	3·00	8·33	—0·535	16
	11·13	2·90	8·23	—0·531	16
	11·66	3·30	8·36	—0·548	16
	11·64	3·40	8·24	—0·548	17
	10·92	2·65	8·27	—0·541	16
	11·52	3·20	8·32	—0·542	16
	11·13	2·75	8·38	—0·541	17
	12·02	3·65	8·37	—0·542	16
	10·93	2·45	8·48	—0·542	16
	10·76	2·55	8·21	—0·541	16
	11·08	2·60	8·48	—0·543	17
	11·35	3·10	8·25	—0·536	16
	10·84	2·40	8·44	—0·534	17
	11·03	2·65	8·38	—0·535	17
	11·00	2·65	8·35	—0·536	17
	10·77	2·60	8·17	—0·545	17
	11·25	3·15	8·10	—0·531	17
	11·63	3·15	8·48	—0·542	16
	11·29	2·90	8·39	—0·540	17
	10·51	2·50	8·01	—0·537	14
	11·32	3·05	8·27	—0·557	17
	11·73	3·40	8·33	—0·556	18
	10·47	2·40	8·07	—0·539	15
	11·32	2·90	8·42	—0·541	16
	12·58	4·25	8·33	—0·548	17
	12·64	4·35	8·29	—0·548	16
	11·26	2·90	8·36	—0·538	16
	11·50	3·25	8·25	—0·536	16
	11·60	3·20	8·40	—0·533	17
	12·38	3·90	8·48	—0·544	16
	11·26	2·85	8·41	—0·539	16
	11·06	2·60	8·46	—0·542	15
	10·66	2·40	8·26	—0·542	14
	11·36	2·90	8·46	—0·548	16
	11·93	3·50	8·43	—0·554	16
	11·29	2·80	8·49	—0·547	15
	10·75	2·50	8·25	—0·548	15
	11·42	3·40	8·02	—0·547	17
	12·26	4·05	8·21	—0·543	16
	11·46	3·30	8·16	—0·538	15
	12·40	4·00	8·40	—0·541	18
	11·27	2·85	8·42	—0·540	17
	12·46	4·15	8·31	—0·545	16
	11·20	2·90	8·30	—0·539	17
	11·67	3·35	8·32	—0·539	16
	11·40	3·15	8·25	—0·540	16
	11·14	2·70	8·44	—0·556	18
	10·75	2·75	8·00	—0·537	17
	11·20	2·85	8·35	—0·535	17
	11·20	2·90	8·30	—0·542	17
	11·48	3·20	8·28	—0·541	17
ow"	samples:				
	11·31	2·86	8·45	—0·540	16
	12·05	3·72	8·33	—0·549	16

Adulteration of samples other than milk.

able 5 are set out other samples of food and drugs found to be adulterated isfactory, and any subsequent action taken in respect of such samples. ng the table are detailed notes on matters of interest arising from the of these samples.

TABLE 5.

Samples other than milk.

Adulterated and other unsatisfactory samples and action taken.

Informal samples								Formal samples						Legal proceedings		
Article	Adulterated or unsatisfactory	Cautioned	Further samples taken or being sought	Irregularity deemed too slight for further action	Referred to Weights and Measures Department	Referred to M.O.H. of local authority concerned	Dealt with under Unsound Food Clauses	Irregularity deemed to be accidental	Adulterated or unsatisfactory	Cautioned	Legal proceedings ordered	Referred to M.O.H. of local authority concerned	Further sample taken	Withdrawn from stock	Summoned	Fined	Amount of fines £ s. d	Amount of costs
Bottled mint jelly																		
Bread																		
Cake mixtures																		
Canned cream																		
Cheese																		
Christmas pudding																		
Dried cereal soup mixture																		
Dried pulses	1								1									
Dried soup																		
Energy food																		
Jelly crystals																		
Meat products	2	2						1	4	2	2	1	1		2	2	20 0 0	
Pickles	1								1									
Potato crisps																		
Preserves	1	1							2	1			1					
Sauce																		
Spices	1	1							1	1			1					
Suet, shredded	2	1	2															
Sugar confectionery	3	1	2		2		1											
Glucose and vitamin D	1	1	1	1		1												
Medicated lozenges	1																	

Some notes on particular cases of adulteration or irregularity.

Bottled mint jelly (informal). This sample was submitted in the manufacrs' original container, a glass jar bearing a printed label. The wording on label included the following:— " Mint jelly. Made from mint, sugar, in, Orleans wine vinegar, colouring." The product consisted of a pale n transparent jelly speckled with small pieces of mint. On analysis the wing results were obtained :—Sugars 51·2 per cent; acetic acid 1·4 per (equivalent to vinegar about 30 per cent); pectin 0·8 per cent; dried ed mint leaves 0·3 per cent (equivalent to fresh mint roughly 2 per cent). omply with the Labelling of Food Order, 1953 (or its predecessors) it would ecessary to declare the ingredients " in the order of the proportion in h they were used, the ingredient used in the greatest proportion (by nt) being specified first ". It appears therefore that the declaration of dients should be in the following order:—Sugar, wine vinegar, pectin, mint, colouring. Or alternatively, if the product is made from fresh :—Sugar, wine vinegar, mint, pectin, colouring.

[The packers were advised to comply with the Labelling of Food Order, and requested to submit a specimen of an amended label.]

read (informal complaint). A sample was submitted by a sampling r who was investigating a private purchaser's complaint that a foreign had been found in the bread. As submitted the sample consisted of a on of a small white loaf. Embedded in the cut surface of the loaf (that say, in the " crumb " of the loaf) was a twisted and bent piece of iron about $\frac{1}{2}$ inch long. From the local staining in the loaf and from the ent stained crumb on the metal, it was clear that the wire had been present loaf at the time of baking. Both ends of the wire had a broken surface, he wire looked like a portion of a nail, or wire-staple, with both ends ng.

[An investigation was made at the bakery and effective precautions were adopted to prevent recurrence.]

own bread (informal complaint.) This sample, submitted to investigate chaser's complaint, consisted of about two-thirds of a loaf. The cut e revealed a mark or spot, somewhat moist and hollow in the centre, was whitish and was surrounded by a zone in which the colour of the was seen to be stained an orange-yellow colour when compared with st of the cut surface. The stain penetrated about an inch into the ning portion of the loaf. The whole of the stained portion of the bread moved and was found to weigh 3·7 grammes (about $\frac{1}{8}$ oz.). The weight whole sample was about 16 oz. On analysis the stained portion of was found to contain an abnormally high proportion of carbonate of namely 4.4 per cent as Na_2CO_3. Crumbs of this portion tasted of ". The stain could be imitated by allowing drops of sodium carbonate n to soak into a slice from the unstained portions of the loaf. The of the spot was probably a small lump of bicarbonate of soda which caped being rubbed down during kneading and had gone into solution hot moist dough during baking. The estimated original weight of the was 0.25 gramme (about 4 grains). In an isolated instance this might sidered as not being harmful, though the sample was unsuitable for nption by reason of a gross and obvious defect in quality.

[The circumstances were investigated at the bakery and precautions o prevent a recurrence were recommended.]

Sweetened cake mixture (two informal samples). The second sampl procured to provide more material for analysis. Both samples were subr in the packers' original cartons bearing printed matter including th lowing:— " Ingredients: M. flour, sugar, edible starch, baking powder, glucose, flavouring, sodium alginate, calcium alginate, glycerine, benzoic colouring." The cartons each contained a flour mixture in a paper bag transparent plastic envelope containing semi-transparent jelly-like ro masses about ½ inch in diameter (cake decorations). A careful search made for benzoic acid which was declared as an ingredient and benzoic if any, was found to be present in a proportion less than thirty parts per m either in the flour mixture or in the decorations. It would be a breach Public Health (Preservatives, etc., in Foods) Regulations, 1925, to ad benzoic acid to a sweetened flour mixture or to a cake decoration. C other hand, if no benzoic acid is present, there appears to be a breach Labelling of Food Order, 1953, which requires " a true statement . . ." ingredients. (The predecessor of the 1953 Order, namely the Labelli Food Order, 1950, contained the same requirement.)

[The manufacturer was asked for an explanation and remind the requirements of the Labelling of Food Order and of the Preserv Regulations.]

Canned cream (two informal samples). These independent sa consisting of unopened cans of different brands of canned sterilised were found to contain less than the stated weight of cream. The compo of the cream was satisfactory.

[The facts were reported to the Weights and Measures Depa and it was found that, generally speaking, the net weights of the co of a number of cans, considered as a whole, were satisfactory.]

Cheese (cheese-spread, informal). The sample was contained in a bearing printed matter. It appeared to be a Danish product but the w on the carton was in English, and included the words: " Fat 45% of th dry solids." On analysis the sample was found to contain only 32·5 p of fat, expressed as a proportion of the dry solids. Thus, on comp with the wording on the carton, there was found to be a deficiency amounting to 27 per cent of the declared proportion of fat.

[A formal sample was requested, but the product was no obtainable.]

Christmas pudding (informal). It appears from the Labelling of Food 1953, that Christmas pudding should bear a label stating the ingredients appropriate order (i.e. in order of proportion by weight, the ingredien in greatest proportion being specified first). This follows from the fa though flour confectionery is exempted from all the provisions of the the definition of " flour confectionery " in the Order, while including made puddings, specifically excludes Christmas puddings.

The above sample was wrapped in a cellophane packet and bore a paper label with wording including the following: " Ingredients: vine spices, sugar, flour, fat, peel, rusk, salt," and the makers' name and a The following analytical results were obtained:—Water 20 per cent; fa cent; sucrose 7 per cent; reducing sugar as invert 44 per cent. Some sugar may have been formed from sucrose during cooking and thus less may appear in the analysis than was actually present in the raw material. of the reducing sugar would be dextrose derived from vine fruits, contain about 60 per cent of dextrose. It is impossible by analysis to fi

ion the proportion of vine fruits in a cooked pudding. The results of xamination are mainly consistent with the statement of ingredients, but one notable exception—" spices " should appear near the end of the ient, probably between " rusk " and " salt." The Labelling of Food does not allow the declaration of fat simply as " fat "; either the fatty lient should be named as lard, margarine, etc., or it should be declared ovided in the First Schedule of the Order, Item 3) as " edible fat." er, the item " peel " should be expanded at least to " citrus peel ".

[The attention of the packers was drawn to the requirements of the Labelling of Food Order, and they undertook to comply with the Order in future.]

real soup mixture (two informal samples). A sample was submitted in ackers' original container, a cellophane packet. On examination the nts were seen to consist of white beans, whole peas, split peas, lentils, arley, and fine tapioca. In general the contents were clean and of good rance. In one place, however, a small mass of the ingredients was found adherent and was seen to be held together by insect threads. There ne characteristic webbing with excreta, and a small dead grub, nearly ng in the dried condition, was found. This grub must have been alive he mixing of the ingredients, and probably after packing in the cellophane . Dried pulses and cereals are liable to attack by moth-larvae. The t instance is an example of almost the minimal observable attack and an d grub might have little significance. On the other hand, it might be a f perhaps more serious infestation at some stage in the preparation of the uff. Because the labelling was considered unsatisfactory, a second al sample of the same product was requested and was submitted in the s' cellophane packet unopened. Printed matter rendered the greater n of the cellophane quite opaque, but the contents could be seen through d about ½ in. wide running round the packet. The printed wording ed the following: " Cereal Soup Mixture, 8 oz. net, foreign produce," e name and address of the packers. There was no declaration of ingre-

On examination the net weight of the contents was found to be z. The packet was found to contain the following constituent parts in llowing order:—Dried peas, barley, yellow split peas, rice, green split ried beans, lentils, tapioca (small pellets). To comply with the Labelling od Order, the printed matter upon the packet would have to include a ent at least to the following effect:— Ingredients: dried pulses, cereals, a.

[No further signs of infestation were observed on visiting the shop or factory. The packers undertook to comply with the Labelling of Food Order.]

ed pulses (dried beans, formal). This sample consisted of large white eans. On examination the sample was found to consist of 98 beans, ne of these were seen to have been attacked by insects. Six beans had nly slightly attacked while three had been bored, and on separating tyledons of these three beans a cavity was visible containing insect . In one of the three beans the excavation was considerable and the contained, in addition to much excreta, insect parts and webbing. ature of the foodstuff makes long boiling certain during preparation, r this reason little actual risk of danger to health might be anticipated. egree of infestation observed would, however, warrant examination of

[The small stock remaining in the shop where the sample was rocured was discarded.]

Dried soup (" chicken noodle soup," informal complaint). This was submitted by a sampling officer who was investigating a private pur complaint that the article contained beetles. The sample itself was co in the packers' original container which had been opened. The contai a rectangular packet made up of laminated metal foil bearing printed including the packers' name and address and a list of ingredients, " Egg salt, chicken prior to dehydration, hydrolysed protein, edible oils, sodium glutamate, sugar, wheat starch, onion powder, spice, parsley, flav The contents consisted of two parts, noodles like pieces of vermicel ¼ in. long, and an elongated mass of an almost dry, friable paste wh sumably contained all the rest of the declared ingredients. Among the were found two living beetles about ¼ in. long, identified as " larder (Dermestes lardarius), also a small larva which could have been a lard larva in an early stage and many insect parts which probably were discarded pupa-cases of the same beetle. There were also small masses containing excreta. These findings indicated that the materi packed had probably contained eggs or larvae. The larder beetle is ofte among farinaceous foods, but the larvae need animal food for devel In this case animal food could have been provided by the chicken as an ingredient.

[Two other packets sold at the same shop, and believed to b the same batch, were found to be free from infestation and app be in very good condition from the point of view of soundne medical officer of health for the area of the packers' factory was and the packers themselves were cautioned.]

Energy food (informal). This sample was submitted in the original container which was a waxed carton with a screw-on lid o material to the carton. The carton itself bore the traders' name descriptive wording. An adhesive label on the lid bore the traders' n the wording included the following: " The golden energy food." than butter." The name and address of the packers was given. Also were a statement of ingredients and a declaration of vitamins. The s of ingredients was: " Containing grape sugar, cane sugar, cumari analysis the composition of the sample was found to consist principal following ingredients:—Technical invert sugar 74 per cent; sucrose sugar ") 4 per cent; water 21 per cent; mineral matter 0·16 per cent; fl Technical invert sugar is manufactured by chemical means from sucr or beet sugar) and consists of about equal parts of dextrose and l Technical invert sugar cannot be described as " grape sugar " whi early times has always been the name given to dextrose or crystallised The statement of ingredients did not agree therefore with the com found by analysis. Also it was noted that the form of declaration of was not strictly in accordance with the Second Schedule of the Lab Food Order.

[In correspondence, the packers made an admission that t was " made from cane sugar." They were cautioned, and strong to comply with the Labelling of Food Order in respect of t ingredients and in the declaration of vitamins. The suggested practice with regard to vitamins in " The Advertising Label Composition of Food " (Ministry of Food Report, 1949) wa mended to their particular notice.]

lly (table-jelly preparations, informal). A sample was submitted in the rs' carton, a rectangular box of thin card bearing printed matter. On f the two largest faces of the carton, and printed directly upon the carton, the following words in bold type : " Chocolate Cup. No sugar red." On the other of its two largest faces, the carton bore an adhesive with printed matter upon the label as follows: " Directions. Place the nts of this pack in a bowl, add sufficient very hot water to make up the to one pint and stir well until completely dissolved. Pour into a mould usly wetted with cold water, then put in a cool place to set. Ingredients: gelatine, flavouring, tartaric acid and colouring. The manufacturers r the indulgence of the public for this temporary pack which is entirely difficulties of packing material supplies." The printed matter upon the was in small type, compared with the words Chocolate Cup on the . Obviously, the wording upon the label was appropriate for " table rystals." Neither upon the carton nor upon the label was the product ere described as " table jelly crystals." On analysis the sample was to have the composition of " table jelly crystals " complying with the ements of the Food Standards (Table Jellies) Order, 1949. The sampling purchased the article as " Chocolate Cup," which name usually means tened cocoa product and he expected to receive such a product. There idently a major error in labelling, but in circumstances which strongly ted accident and not fraud. The sample was classified as " wrongly d."

[The manufacturers were cautioned, and the necessity for correct abelling was emphasised.]

at products (brawn, formal). A sample procured in a shop was found to sulphur dioxide (SO_2) to the extent of 150 parts per million.

[The manufacturers were fined £10.]

t products (polony, formal). A sample of polony (a cooked product) d in a shop was found to contain sulphur dioxide (SO_2) to the extent parts per million.

[The manufacturers (the same firm as was responsible for the brawn ove) pleaded in both cases that the addition was contrary to their structions and due to the inexperience of an assistant. The fine imposed this case was also £10.]

t products (sausage, formal). On analysis a sample of " beef sausage " nd to contain sulphur dioxide (SO_2) to the extent of 50 parts per The sample bore the sampling officer's note, " preservative not ." If the sausage, on sale, had been accompanied by a declaration in the id down in the Public Health (Preservatives, etc.) Regulations, or vely if there had been a notice in the shop in similar terms, the sample wfully have contained up to 450 parts per million of sulphur dioxide.

[Both the shopkeeper who sold the sample and the supplier were tioned, and the necessity for the declaration of preservative in sausage s emphasised.]

Meat products (sausage, formal). This sample was submitted as servative declared " and the primary examination was for preservative sample was found to contain sulphur dioxide (SO_2) to the extent of 6 per million and this is well within the permitted amount. The whole weighed about five ounces. In the course of examination one of the p sausage was removed from its skin and was found to enclose a mass of dry fibrous and partly felted matter of a dark grey-brown colour and a big as a pea. With the object of determining its origin, this dark-c matter was examined microscopically. Normal ingredients, such a pepper, spices and seasonings, were absent. The matter was thus fo sausage. It was found to consist very largely of finely divided vegetable among which a few particles of wood and some portions of leaves wer nisable. A definite but faint positive test for bile-salts was obtained sumptive indication that faecal matter was present. This foreign matter might be described as a small ball of miscellaneous dirt, was regarde indication of a failure to reach a proper standard of cleanliness in the of manufacture.

[Inspectors visited the factory and required certain structural and more hygienic planning.]

Pickles (" piccalilli," formal). This sample was normal in general sition and appearance and its ingredients were substantially in acc with the statement of ingredients on the label. The portion, submitt sealed glass jar, weighed about five and a half ounces. Among the solic present was found a piece of wood, measuring about $\frac{15}{16}$in. by $\frac{7}{16}$in. After drying it weighed only 0.12 grammes (about 2 grains). It sug splinter from a pickling vat. It appeared that this object might possi caused damage to the mouth or throat of a consumer and, accordin sample was classified as unsatisfactory.

[The facts were reported to the medical officer of health of of manufacture.]

Potato crisps (informal). A sample consisting of an opened tran paper packet of potato crisps was submitted to investigate a pur complaint that a foreign body was present. On examination, the pac found to contain, beside the customary small paper screw containing a quantity of crisps, a semi-transparent brown mass resembling very jelly, with a very weak rubber-like texture and an unpleasant stale " oil " smell. The remaining crisps weighed just under one ounce and t like mass weighed about one-seventh of an ounce. On analysis the forei was found to consist of polymerised oil. It was only possible to co how it may have reached the sample. The likeliest source was some the manufacturer's plant where hot cooking-fat was exposed for long to the air and formed a skin or film on hot metal. In some way som film might have become detached and entered the packet. The forei happened to have properties which rendered it æsthetically very object even disgusting; but, apart from this psychological effect the mate relatively harmless.

[A cautionary letter was sent to the manufacturers stres necessity of preventing a recurrence.]

Preserves (lemon curd, formal). On analysis a sample was found to be tly deficient in " soluble solids "; that is to say, deficient in sugar. The l Standards (Preserves) Order, as amended, requires that fruit curd shall ain 65 per cent of " soluble solids "; whereas the sample contained only per cent. The deficiency, expressed as a percentage of the required amount oluble solids, was thus 2·7 per cent.

[A further formal sample was taken and found to be satisfactory.]

reserves (marmalade, formal). This sample was found on examination to ain only 65·0 per cent of soluble solids, whereas the Food Standards erves) Order, 1944, requires 68·5 per cent of soluble solids (and no dment then in force had varied this requirement.) For practical purposes soluble solids " may be taken to be sugar. The deficiency, expressed as centage of the standard proportion of soluble solids, amounted to 5·1 per

[A cautionary letter was sent to the manufacturers.]

uce (mustard sauce, informal). This sample was submitted in the manu- rers' original pack, a bottle of about two fluid ounces capacity. A label the description " Mustard Sauce," and a neck-band label had the state- " Prepared from sugar, mustard, malt vinegar, salt, tragacanth, flavour- nd spices ". There appeared to be a breach of the Labelling of Food in the following respect:— on analysis the sample was found to contain le acidity equivalent to about 60 per cent to 75 per cent of malt vinegar; to comply with the Order, " malt vinegar " should have been stated the list of ingredients. Alternatively, it would be necessary to postulate resence of a quantity of malt vinegar somewhat less than 12 per cent, e addition of acetic acid as such; in which case the statement of ingredients l include a declaration of " acetic acid " between " malt vinegar " and ". The rest of the analysis was compatible with the presence of the other ients in the order stated.

[A cautionary letter was sent to the manufacturers. The product was subsequently relabelled.]

ces (curry powder, informal and formal). The Food Standards (Curry r) Order, 1949, fixes a limit for lead content of curry powder at 10 parts (Pb) per million parts of curry powder. An informal sample submitted original pack, namely a small cardboard cylindrical carton with tinplate was found to contain lead to the extent of 15 parts per million. When al sample was procured by mixing and dividing the contents of several s, the proportion of lead was found to lie very close to the limit of ts per million and the formal sample was reported as satisfactory. When ar type of pack of a different brand was submitted informally on another n, lead was found to be present to the extent of 25 parts per million. responding formal sample was requested and was found to contain s of lead per million parts. A certificate of analysis was accordingly issued.

[The packers were strongly cautioned.]

dded suet (formal). A sample was found on examination to contain ·4 per cent of fat, whereas the Food Standards (Shredded Suet) Order, equires not less than 83 per cent of fat. In view of the possibility of ion of starch filler, and consequent interference with the fat content product, both on packing and on sampling, a further formal sample uested. On analysis this sample was found to comply with the standard.

Sweets (informal). Three independent samples were submitted for ex
tion in relation to various purchasers' complaints lodged at the Health I
ment. A sample of nut-toffee consisted of two large pieces of broken
containing nuts. Adhering to one of the pieces (both of which had a
appearance) was one particle which in size and shape resembled
excrement. As a result of microscopic examination of the particle the c
was expressed that it was, in fact, mouse-dirt. A sample of chocolate-c
fudge was in the form of a bar with a D-shaped cross-section and was
consist of a buff-coloured material (fudge) coated with chocolate. The
incomplete, one end having been broken off. Embedded in the fudge
broken end of the bar was a piece of metal. This was easily cleaned by
and was found to be of a somewhat irregular elongated shape, $\frac{3}{4}$ inc
and weighing 1·64 grammes. It had a specific gravity of 7·9, had a gre
sheen and great hardness and toughness, and was strongly attracte
magnet—characteristics indicative of steel. One surface had a broken
ance, as if the object had been broken from some larger piece of ste
opinion as to its precise origin was formed, but it bore marks which su
that it might have been caught up in some kind of machinery. A sar
French nougat consisted of almost rectangular pieces of a white to
confection in which were embedded nuts and red fruits resemblin
cherries. The piece complained of was apparently incomplete, as it a
to have been broken off at one end. Embedded in the broken end we
dark objects which were identified as the head and parts of the tho
abdomen of a fly resembling a house-fly. A fly's wing was embedded c
Legs were missing. Judging from the disposition of the insect parts,
were much crushed and distorted, the fly had been present inside th
cake before cutting, and the cutting-knife had removed the legs whic
be found in another piece of the material, though they did not appea
present in any piece of the sample submitted. The opinion was ex
that the fly could not have been introduced into the sweetmeat by th
nor could it have been impressed upon the piece of sweetmeat after cut

[In the case of the nut-toffee, the contamination was deemed
arisen in the premises of the retailer and remaining stocks were surr
under the "unsound food" clauses of the Food and Drugs
other cases the foreign bodies found were deemed to have ente
foodstuffs during manufacture. Manufacturers were cautioned,
respective medical officers of health of the areas of manufactu
notified.]

Drugs.

Glucose with vitamin D and calcium phosphate (informal). This sam
submitted in a carton which bore a declaration including the follo
Calcium phosphate 1 per cent. The remainder of the material c
substantially of crystalline glucose, containing only traces of a fatty
presumably associated with the presence of vitamin D. On analysis the
was found to contain only 0·52 per cent of calcium phosphate. A corres
formal sample was requested and at first it was reported that the pro
not on sale. When a new batch was delivered from the wholesale s
a formal sample was obtained. It was found however that calcium ph
was no longer declared as an ingredient.

edicated lozenges (informal). A pre-packed proprietary article consisted ulded tablets resembling sweets wrapped in waxed paper and enclosed arton. The carton bore printed matter which clearly included recom- tion as a medicine in the following terms: " efficacious for dry, husky, g throats." There was upon the carton no quantitative statement of ingredients and in this respect there was a failure to comply with the acy and Medicines Act, 1941. No other printed matter on any label, er, or slip, could be found in or upon the package to make good any on on the carton.

[On investigation, the sampling officer found that later cartons ssued by the same packers all bore amended wording, including the ecessary statement of active constituents and quantitative particulars. No further action was therefore taken.]

Adulteration statistics.

Food and Drugs Act, 1938, contains the following provision in 74:—

Every public analyst shall, as soon as may be after the last day of March, the last day of June, the last day of September and the last day of December in every year, report to the authority by whom he was appointed he number of articles which have been analysed by him under this ct in his capacity of public analyst for their area during the preceding uarter of a year and the result of each analysis.

a guide to Food and Drugs Authorities and their Public Analysts, the y of Health (then the responsible Ministry) issued a Memorandum " Procedure under the Food and Drugs Act, Etc." and referred to as o. 36/Foods." This Memorandum was last revised in 1939 (i.e. after ning into force of the present Food and Drugs Act of 1938) and is d as still valid. It contains guidance upon several matters, including analysts' reports. In an appendix the " suggested form " of a public s report is set out, and in it the data required by the Act are to be given ar form. The first table headed "Analyses " is in the form of Table 1 report, and the words in the heading of Table 1, " Number adulterated rwise giving rise to irregularity," are taken direct from " Memo. 36/

rst sight the definition of adulteration might seem very straightforward. ncise Oxford Dictionary gives this definition—falsification by the re of a baser ingredient.

ntury ago adulteration, in the fullest sense of the term, was common. he same time the advance in the science of analytical chemistry, together perfection of the microscope as an optical instrument and the new ge of recognising powdered substances by its means, for the first time l possible the detection of the most common kinds of adulteration.

exposure of the state of affairs was largely the work of a " Sanitary sion " set up by the medical periodical " The Lancet." The reports ommission, of which Dr. A. H. Hassall was a prominent member, were d and led to a public outcry and thus to the beginnings of modern food n.

In his book "Adulterations Detected," 1857, Hassall has some ca worded remarks on the meaning of " adulteration," which he says

> " consists in the intentional addition to an article, for purposes c
> " or deception, of any substance or substances the presence of w
> " not acknowledged in the name under which the article is sold
> " not easy so to frame a definition as that it shall apply to every
> " that now given does, however, most certainly embrace the
> " majority of adulterations practised, and it excludes substit
> " impurities, and accidental contaminations, because it specifie
> " the addition must be intentional."

In Hassall's view also

> " the sale of one article in place of another is not an adulteration
> " substitution. Again the presence of substances in articles in conse
> " of impurities contained in the materials out of which they we
> " pared, as, for example, of arsenic in the hydrochloric acid used
> " preparation of unfermented bread does not constitute adulte
> " they are simply impurities. Lastly, the accidental presence c
> " stances in any commodity does not constitute adulteration,"

but what Hassall terms " accidental contamination."

For many years until the 1939 war interfered with publication, the M of Health produced a short annual summary of the reports of public a in the form of a booklet called " Sale of Food and Drugs." In the sum for 1931 to 1933, for example, the degree of adulteration was reported text in the following form (taken from the 1933 edition): " 7,601 sample reported as adulterated or not up to standard. The percentage adul or below standard was 5·5." Yet in the tables for the same year th figure 5·5 appears for the total of all samples under the heading " Per adulterated." In the corresponding editions of " Sale of Food and D for the years 1934 to 1937 inclusive the degree of adulteration is stated text in the form (taken from the 1937 edition): " The number of s reported against was 8,401, or 5.5 per cent," but again in the table th 5·5 appears as " Percentage adulterated." For the first time the 1938 of " Sale of Food and Drugs " (and this was the last of these booklets to separately) while still using in the text the words " the number reported was 8,433 or 5·7 per cent," has a footnote to the tables related by an a to the heading " Percentage Adulterated*" and the footnote states, ' includes all samples giving rise to irregularity, e.g., adulteration, la offences, etc."

Those who have been accustomed to examine adulteration statistics number of years are probably well aware that in any public analyst's or n report the term " percentage adulterated " means " percentage adulter otherwise giving rise to irregularity " though the meaning has not alway explicitly stated. In some reports alternative terms have been adopt example, " percentage adulterated, etc.", " percentage irregular," " per unsatisfactory," " percentage condemned," " percentage incorrect," centage not up to requirements." There may even be some classifica unsatisfactory samples, for example the following system has been u many years:— the data given are, total number of samples, number terated," number " inferior," number " unsatisfactory " (=adulter inferior), and " total percentage unsatisfactory."

a matter of interest, Hassall's early attempts to define adulteration have given above. At the present time there are few who would make a tion between adulteration and gross contamination. Thus, some years ago, 'lemonade" was made from lemon juice and kept in " galvanised " uckets so that it caused illness from zinc poisoning, the lemonade might een described as " adulterated," as was the beer grossly contaminated rsenic during the arsenic scare at the beginning of the century, or the powder which contained as an ingredient potassium carbonate con- ted with arsenic. What Hassall distinguished as " substitution," if lent, could be considered as 100 per cent. adulteration if the substitute finitely of an inferior composition as a food, or of lower cash value.

the other hand there are many instances which could not reasonably ribed as adulteration but rather as " otherwise giving rise to irregularity." les of such irregularity are given below.

IRREGULARITY.

ure to comply with a Food Standards Order. (Such a failure may or may not be the lt of a definite " adulteration.")

ure to comply with Labelling of Food Order.

ure to comply with appropriate Public Health Regulations, e.g.:—
Condensed milk.
Dried milk.
Preservatives and colouring matters in food.

re to comply with the labelling provisions of the Pharmacy and Medicines Act.

ppropriate cases.) Failure to comply with the Merchandise Marks Act.

fraudulent misdescription of an article otherwise satisfactory. Substitution by a esome article equivalent in use.

amination: Presence of gross foreign matter or " dirt," iron wire, nails, broken glass, ters of wood. Presence of more insidious contaminants, e.g. metallic impurities, ic, lead, copper, zinc, tin, chromium, etc. Local excess of a permitted ingredient, bicarbonate spot in cake.

tation: Presence of insects, mites or other infestants or their parts. " Filth," evidence dent infestation. Spoiled food caused by infestation.

mposition, incipient decomposition or taint. " Unsoundness."

from packing materials or from neighbouring materials on storage, if sufficient to a definite defect in quality.

NOTES ON IRREGULARITIES LISTED ABOVE.

or example, the Food Standards (Shredded Suet) Order requires a minimum of 3 per cent of beef fat to be present in shredded suet, which is now usually made om refined beef fat and flour. Thus 17 per cent. of flour may lawfully be present such a product. If a sub-standard mixture is made (and this may arise from a istake in manufacture, causing a local excess of flour), it is probably more logical to nsider it as a shredded suet failing to comply with the standard than as a shredded uet " adulterated " by the addition of excess flour. The facts of the case may mphasise or minimise the " adulteration " aspect.

2. The Food Standards Orders and the Labelling of Food Order derived their owers from Defence Regulations and have been kept in force by year-to-year gislation.

veral Public Health Regulations, originally made under various Public Health Acts, e now kept in force, modified, or amended, by means of powers conferred by the od and Drugs Act.

Sandys v. Rhodes (1903) the High Court held that no offence had been committed selling tapioca as sago, and this case is still quoted. (Presumably the " offence " question would be selling to the prejudice of the purchaser a food not of the nature not of the substance or not of the quality demanded; or more precisely, a breach the corresponding section of the Act then in force.)

7. Very much more importance has been attached to gross accidental contamin recent years and the ordinary purchaser has responded to the publicity give subject by bringing more complaints to the notice of Food and Drugs Au Reputable firms are giving increased attention to hygiene and " good housek within their factories.

9. Here the province of the public analyst runs parallel with that of the bacte Sometimes the same person combines the two functions, but more often two laboratories are in operation, and in such circumstances close collaboration highest value. When pathogenic organisms are present in food the responsi the examination devolves entirely upon the bacteriologist.

It has been pointed out many times that " adulteration statistics " misleading. The annual review, " Sale of Food and Drugs," mentione had some warnings on this subject. The " percentage adulterated or ot giving rise to irregularity " reflects too many variables at one time. adulterations or irregularities occurred then the said percentage would ob be zero, but if any adulterations and irregularities do occur, the " per adulterated, etc." figure is affected by the system of sampling and efficiency of those who examine samples, and not only by their efficie by their personal idiosyncrasy in deciding where to draw the line b " genuine " and just sufficiently " irregular " to deserve comment.

One very obvious effect of the system of sampling may be mentione here. For very many years sampling officers have been encouraged to u discretion in deciding in given circumstances whether to sample " for (i.e. according to all the requirements of division into three parts, etc., down in the Act) or " informally " (i.e. without complying with a requirements, and this means that the sample is not divided, and no is left with the vendor). If we can envisage two areas for which we p the same average level of " adulteration, etc.," and in one a certain nu samples all taken formally, and in the other the same number all take mally, then (at this stage) the percentage of samples reported as " adul etc." in the two areas will (on the average of a large number of samples, i with the same degree of strictness) be the same. But in most cases it is n to follow an informal sample, when found incorrect, with a formal This latter sample might itself be genuine, and occasionally is, but it much more likely to turn out incorrect than a similar sample taken at r When all the necessary formal samples have been taken, and their combined with the rest, it is obvious that the " percentage adulterate in the area where all the original sampling was informal, will appear than in the other area (it might appear almost twice as great); though postulated the same level of adulteration for both. This comment intended as a recommendation against informal sampling in appropriat it is often very valuable to an analyst to have a " preliminary run " on or difficult article, and it is often useful to see the material in its container.

Sampling by a keen and experienced officer will produce a highe centage 'adulteration, etc." than sampling by an efficient random s From the point of view of statistics the latter is desirable. A combin the two methods would in my view be a useful compromise, leading sampling of an intelligent " cross-section " of *all* articles of food an offered for sale but directing a keen eye towards the more obviously "susp foods and drugs.

Ice cream.

he standard for the composition of ice cream has been subject to periodical v by the Ministry of Food, according to the availability of fat, sugar and products. The Food Standards (Ice Cream) Order, 1951, regulated the osition of the product to contain not less than 5 per cent fat, 10 per cent and 7½ per cent non-fatty milk solids. An amendment in July, 1952, ed the minimum fat content to 4 per cent and the minimum non-fatty solids to 5 per cent. In June, 1953, the standard was restored to that of Perhaps, speculatively, one might even look forward to the day when ory provision might be made for a special quality of ice cream, the fat ich should consist entirely of butter fat!

uring the year, 33 samples were examined, and every sample complied he standard. The minimum fat content observed was 6·9 per cent and inimum sugar content 10·2 per cent. Percentages of sugar ranged from o 16·2 per cent., while the range of fat content is given in Table 6 below.

TABLE 6.

Fat content of ice cream.

Percentage of fat	*Numbers of samples*
Below 7·4	1
7·5 to 9·9	10
10·0 to 12·4	20
12·5 and over (maximum 12·7)	2
	33

Ice lollies.

pecial investigation by inspectors of the Milk Control Section led to the sion of 36 informal samples to be examined for harmful metallic impuri- ncluded in the 36 samples were two samples of "ice-cream lollies" and olly syrup" (a product suitable for dilution with water before freezing). samples were examined for the most dangerous commonly occurring ous metals, namely arsenic, lead and copper. The amounts of these found in the samples fell within limits which may be accepted as safe.

en it is remembered that the fluid frozen to make lollies need only be act with the mould for a few hours at a low temperature, it may be d that with reasonable care there would exist little risk of excessive contamination from the moulds. In the samples examined, no relation e traced between the composition of the mould and the amount of found in the lolly. Still, it must be admitted that if moulds, during between freezings, were left in an unclean condition, either moistened lly-mix or corroding in air, then the next lollies frozen in them would greater risk of metallic contamination. These considerations emphasise ue of inspection of lolly-freezers.

re remains the possibility of the presence of metallic contamination in edients of the fluids prepared for freezing. Some of these ingredients ave been in contact with metals during manufacture. Where actual ice is an ingredient, some contamination may occur from metallic nds used as sprays by fruit growers.

Results for 36 samples, expressed in parts per million, are as follows:

Arsenic (as As)	0·1 or less
Lead (as Pb)	0·1 or less in 17 samples
	0·5 in 3 samples
	0·16 average of 36 samples
Copper (as Cu)	1 or less in 13 samples
	1 to 2 in 22 samples
	12 in 1 sample.

Moulds were reported to be of the following materials: glass, p plastic-covered metal, aluminium, tinned copper, soldered " metal."

The sample stated in the table to contain 12 parts per million of c was the " lolly syrup " mentioned above. From examination in comp with the " lolly " prepared from it, this syrup must have been dilute over 20 times, and the copper content (in itself not very alarming) redu quite negligible proportions before consumption.

Nevertheless, it was deemed advisable to pursue further the investi of the metallic impurities in lolly syrups and concentrates. Nine sa having widely different dilution factors, were examined with the foll results:—

Recommended dilution	*Parts per million*		
Sample : water	Arsenic (As)	Lead (Pb)	Copper (Cu)
1 : 1	nil to 0·1	nil to 0·1	1 to 2
1 : 4	nil to 0·1	nil to 0·1	nil to 1
1 : 7	nil to 0·1	nil to 0·1	1 to 2
1 : 9	nil to 0·1	10	1 to 2
1 : 9	nil to 0·1	3·5	3
1 : 9	nil to 0·1	nil to 0·1	2 to 3
1 : 19	nil to 0·1	nil to 0·1	1 to 2
1 : 49	nil to 0·1	40	15
1 : 800	nil to 0·1	nil to 0·1	2 to 3

After taking into account the dilution before consumption, most o figures are quite acceptable. Perhaps two samples may be picked out as b line cases; where lead occurs to the extent of 10 parts per million in a to be diluted 1 : 9, and to the extent of 40 parts per million in a syrup diluted 1 : 49. These would produce a lead content of about 1 pa million in the final product, and if such a lolly liquor were subjected to exposure to lead-containing metallic apparatus, this one part per million make a significant contribution to a total lead-content which might tra the safe limit.

An attempt was made at the factory to secure a sample of every ingr of the syrup the lead content of which was found to be 40 parts per m After a short lapse of time it is exceedingly difficult to trace the preci tainer from which each ingredient is drawn. Specimens were obtained senting as nearly as possible the same batches of the ingredients as wer in the actual preparation of the syrup in question. These specimen marked: orange concentrate, orange oil emulsion, liquid colour, citri (solution), sodium metabisulphite (solution), gum karaya (mucilage) specimen was actually submitted which could account for the amount in the manufactured syrup. (This last part of the investigation is men for completeness, though the analyses were performed during the year

Drinking water.

ble 7 summarises the samples of drinking waters examined during the The purpose of chemical analysis of water in this laboratory is to assist intaining a check on the quality of water as viewed from the health oint. Corresponding samples are usually submitted to the Regional Health Laboratory for bacteriological examination and information is ged between the two laboratories. The examination of samples taken stigate complaints fully or partially justified the complaints in 12 cases, the other 23 instances no support was afforded to complainants' state- In spite of prompt action in sampling, it may happen that a condition rise to a complaint has ceased to exist by the time the sample is taken. nples of the 31 taken for routine examination or as checks on previous ints were found to be somewhat unsatisfactory.

types of complaint made were very similar to those of previous years cluded reports of the presence of " insects," " discolouration," " sedi- " dirty water " and " offensive taste and smell." The " insects " were called water-fleas (Daphnia or Cyclops) in every instance. Although iny crustaceans are themselves harmless it is not surprising that they larm when seen swimming in drinking water. The discolouration of the upply at intervals is apparently due to natural colouring matters in the rom the Longdendale catchment area. Though very pronounced in ases, the colour does not in itself render the water unwholesome. ints of " sediment " and " dirty water " generally arose when silt from ns was washed through the taps. Action by the Waterworks Department caused the trouble to be speedily cleared up. The one complaint of ive taste and smell " was not supported by the sample taken.

ether a sample is or is not submitted in consequence of a particular nt (present or past), it is subjected to a full general analysis, and details ness, reaction (pH), certain dissolved constituents, colour and turbidity rded. These results are reviewed in relation to the wholesomeness of ply. In particular, 66 samples were tested for the presence of lead. mples the amount of lead was 0·1 parts per million or less and in only es did the lead figure lie between 0.1 and 0.2 parts per million.

single sample classified as " miscellaneous " was one of water perco- to the basement of a factory and the analysis was undertaken in order mine, if possible, whether the water was escaping from the public

TABLE 7.

Numbers of water samples examined.

mples taken to investigate complaints	35
utine examinations and checks following previous complaints	31
iscellaneous	1
Total number of samples	67

ples submitted by various sections of the Health Department.

vestigation of suspected food-poisoning. The possibility of irritant substances in food as a cause of illness was eliminated by analysis of of different brands of canned tomatoes from two unconnected s.

vestigation of complaints. No harmful substance was found in the on stamp-hinges suspected by a user to have caused illness.

vo special detergents recommended for large-scale use were examined ble harmful effects on personnel regularly employed in applying them.

Samples submitted by other Corporation departments.

(*a*) Markets Department. A sample of cooked salmon was examine harmful substances. Skin and fatty tissue from a pig were examined to the cause of a yellow discoloration.

(*b*) Education Department. Five "dust-allaying" oils were teste relation to specification.

(*c*) City Architect's Department. Two emulsion paints and one emu paint-thinners were tested in relation to instructions to a contractor.

Samples from other sources.

(*a*) Port of Manchester Health authority. Thirty-two samples of imp foodstuffs have been examined. These may be classified according to the purpose of the analysis as follows: for injurious metallic impurities 1 preservatives 7, for prohibited colouring matters or for declared edible colours 6, for general composition 1. (One sample appears both for pre tives and for prohibited colours.)

(*b*) Hospital management committees. A sample of sausage was exa in relation to specified meat-content. A sample of medicinal galactos examined for purity. Specimens of hair and skin-flakes were examine traces of arsenic.

(*c*) Private firms submitted the following samples for general inform or in relation to various statutory declarations or requirements; swe cornflour 10, flour 4, chocolate-covered wafer biscuits for overall perc sucrose 2, canned stewed steak for soundness, deep-frozen pineapple in for soundness, "Italian chalk" for suitability as dusting powder for confectionery 2.

(*d*) Private individuals submitted the following samples: milk for ha substances (2 samples), dried peas for soundness, dispensed medicine checked against prescription, glycerine of pepsin to be checked against requirements, tablets to be checked against prescription (2 samples), water for taint, flakes of paint to check compliance with specification.

Chemical examinations for H.M. Coroner.

At the request of the Manchester City Coroner, human organs and contents, together with other exhibits, have been examined in conn with two inquests. In the preparation of evidence for these inquests organs or physiological specimens and five related exhibits were exa In one case the verdict included the finding that death was consequent poisoning by sodium fluoride. In the other case a verdict of natural caus returned, for, though amylobarbitone (in capsules) was in the possessi the deceased, the amounts found in the body were consistent with the of not more than medicinal doses.

Measurement of atmospheric pollution.

is work has for its object the collection of data for the Atmospheric ion Research Branch of the Department of Scientific and Industrial rch. When the results are considered on a sufficiently long-term basis, may reveal any significant trends, for better or worse, in the degree of ion of the air at selected points within the Manchester boundary. The maintains eight "deposit gauges," three gravimetric sulphur-dioxide ("lead peroxide apparatus") and one "volumetric sulphur-dioxide and " apparatus, and these are all visited and operated by the laboratory In the last annual report it was indicated that the work involved over separate determinations or analyses during the year. The work has been uously maintained at this level. Results are appended in tabulated

ily average figures for sulphur dioxide and smoke, calculated by monthly for the year and four preceding years, are given in Table 8.

TABLE 8.

Volumetric apparatus for sulphur dioxide and smoke.

Rusholme.

	Daily average sulphur dioxide—parts per million					Daily average smoke—milligrammes per cubic metre				
	1953	1952	1951	1950	1949	1953	1952	1951	1950	1949
.. .. ..	0·211	0·169	0·144	0·164	0·199	0·488	0·393	0·368	0·353	0·262
.. .. ..	0·153	0·203	0·086	0·118	0·205	0·326	0·442	0·230	0·264	0·211
.. .. ..	0·197	0·111	0·120	0·116	0·237	0·447	0·251	0·302	0·289	0·279
.. .. ..	0·089	0·103	0·062	0·082	0·147	0·180	0·208	0·228	0·277	0·164
.. .. ..	0·063	0·074	0·042	0·073	0·144	0·130	0·206	0·209	0·200	0·186
.. .. ..	0·068	0·067	0·028	0·043	0·121	0·159	0·167	0·171	0·115	0·136
.. .. ..	0·029	0·060	0·039	0·047	0·110	0·075	0·126	0·158	0·152	0·112
.. .. ..	0·046	0·052	0·046	0·035	0·084	0·123	0·161	0·164	0·180	0·169
r	0·062	0·092	0·062	0·052	0·096	0·185	0·269	0·213	0·275	0·162
.. .. ..	0·134	0·106	0·092	0·078	0·074	0·389	0·312	0·319	0·315	0·236
r	0·088	0·182	0·101	0·165	0·145	0·241	0·539	0·214	0·525	0·237
.. .. ..	0·139	0·183	0·113	0·211	0·125	0·363	0·422	0·290	0·567	0·236
aily figure l year	0·11	0·12	0·08	0·10	0·14	0·26	0·29	0·24	0·29	0·20

highest daily figure for the sulphur dioxide content of the atmosphere was l on January 20th, when 0.655 parts per million were reported, and esponding lowest figure was 0·011 on July 27th.

highest daily figure for smoke content, namely 1·716 milligrammes per etre, was obtained on January 5th; the lowest concentration of smoke, l on May 18th, was 0.041 milligrammes per cubic metre.

Table 9 gives average values for the amount of atmospheric depo month at seven points within the Manchester area and at one neighb point in the Cheshire area, with the previous year's figures for comparis

TABLE 9.

Deposited atmospheric pollution
(tons per square mile)

Monthly averages.

Station	Rainfall (inches)		Insoluble matter		Soluble matter		
	1953	1952	1953	1952	1953	1952	195
Baguley	2·2	2·2	4·70	8·36	6·47	7·99	11·
Booth Hall	2·6	2·6	8·72	8·79	6·46	7·09	15·
Heaton Park	2·7	2·8	6·52	10·93	5·44	8·95	11·
Monsall	2·4	2·5	11·09	18·17	7·53	8·09	18·
Philips Park	2·6	2·7	16·70	28·03	10·26	11·07	26·
Rusholme	2·4	2·6	12·15	16·66	7·40	10·02	19·
Withington	2·2	2·5	10·57	13·59	5·28	7·30	15·
Average for all gauges	2·4	2·6	10·06	14·93	6·98	8·64	17·
Knowle House (Cheshire)	2·3	2·5	3·21	3·68	4·19	6·15	7·

The results of the measurement of sulphur pollution, by the lead p method, are given for three stations at monthly intervals. This met presentation shows very clearly the regular rise and fall of the average sulphur pollution with the seasons. The pollution is of course heavy winter and relatively light in the summer. (Table 10.)

The lead peroxide (gravimetric) method is somewhat arbitrary. It d upon a chemical reaction between sulphur dioxide gas (and to a much extent other sulphur compounds) and a prepared surface of lead pe The method requires strict standardisation of controllable conditions. however, must be somewhat affected by uncontrollable conditions such strength, and by temperature, pressure and humidity of the air. When of 100 square centimetres of the prepared surface has absorbed, say, grammes of sulphur dioxide from the surrounding air in a day, it is imp to infer in what volume of air that amount of sulphur dioxide was con It may be said in favour of this arbitrary method that it is a good indic the relative intensity of attack by air of different degrees of pollution things as buildings or steel girders. Whereas the standard method pu by the D.S.I.R. requires the results of the volumetric sulphur dioxide ap to be reported as sulphur dioxide (SO_2), the standard method for t peroxide instrument requires results to be reported as sulphur trioxide Though it is not very clear why these different modes of presentatio been selected, the numerical relation between the two is simple. Fiv by weight of SO_3 are equivalent to four parts by weight of SO_2. Al parts by weight of SO_3 are equivalent to two parts by weight of sulphu

TABLE 10.

Sulphur pollution.
(Measurements by lead peroxide method.)

in milligrammes SO_3 per 100 square centimetres exposed surface per day.

	Monsall		Rusholme		Withington	
	1953	1952	1953	1952	1953	1952
.. ..	7·51	5·97	4·29	4·24	3·24	2·59
.. ..	4·85	5·62	3·75	4·46	2·36	2·71
.. ..	5·53	4·28	3·64	2·96	2·59	2·15
.. ..	3·50	3·77	2·35	2·31	1·53	1·51
.. ..	2·74	2·92	1·53	1·72	1·03	0·93
.. ..	2·19	2·49	1·84	1·50	1·09	0·88
.. ..	2·52	2·17	1·07	1·38	0·52	0·65
.. ..	2·78	2·38	1·22	1·18	0·51	0·64
r	3·28	2·72	1·38	2·75	0·85	1·40
.. ..	4·55	4·63	2·33	2·96	1·79	1·93
r	6·00	6·01	2·14	4·75	1·37	3·39
r	5.40	6·70	3·20	4·32	2·48	2·71
average	4·23	4·13	2·39	2·87	1·61	1·79

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE

Honorary Secretary:—C. Metcalfe Brown, M.D., D.P.H., Barrister-a

The Manchester and District Regional Smoke Abatement Comm an advisory organisation of 82 local authorities in South Lancashire and Cheshire, covering an area of about 700 square miles. The Committee' tance is available to member authorities for technical and other pr concerning all forms of atmospheric pollution.

A meeting of the Committee was held in Manchester in December and meetings of the Executive Committee took place in January and 1954. The Committee has considered a large number of suggestion constituent authorities as to the control and abatement of atmospheric po by various means.

As a result, it was decided to submit a statement of representations Committee on Air Pollution which was appointed by the government 1953 and is under the chairmanship of Sir Hugh Beaver.

A number of enquiries and requests for technical assistance wer with by the Committee's officers during the year, particularly with re industrial dusts and fumes and smoke nuisances generally.

The Committee noted with satisfaction the decision of the Mini Housing and Local Government to appoint an Inspector of Alkali work for the Manchester area.

A considerable extension took place during 1953–54 in the Comm two joint schemes for investigation of atmospheric pollution in conjunctio the Department of Scientific and Industrial Research. Two meetings of committees dealing with the joint schemes were held. Particulars as extent of the observations are as follows :—

	Local Authorities	Deposit Gauge	Apparatus		V
			Sulphur (Lead peroxide)	Smoke filters	
Maintained by Regional Smoke Abatement Committee	37	12	80	—	
Maintained independently by member authorities	9	35	23	9	
Totals	46	47	103	9	

In November, 1953, the Assistant Secretary, Mr. C. A. Hay, M.B. appointed Chairman of the Standing Conference of Co-operating Bo Atmospheric Pollution and a member of the Atmospheric Pollution R Committee of the Department of Scientific and Industrial Research.

MATION OF SULPHUR DIOXIDE expressed as mgm. SO_3/day/100 cm² Batch A PbO_2 (louvred cover).

nean results May-September; W_5=mean results November–March; Y_{12}=yearly mean April–March.

SITE	Mean results for period 1948–1953			1952–53			1953
	S_5	W_5	Y_{12}	S_5	W_4	Y_{11}	S_5
ow R.D.							
ington, Ackers Farm	0.80	1.54	1.14	0.82	1.37	0.97	1.06
ington, Moss Hall Farm	1.03	1.75	1.34	1.41	1.81	1.31	1.31
ham Massey, Green Lane Farm	0.68	1.40	0.99	0.67	1.49	0.92	0.82
ngton, Gas Works	2.35	3.81	2.92	2.43	3.39	2.61	2.80
burton, Bent Farm	0.63	1.25	0.89	0.52	1.22	0.74	0.58
M.B.							
n Airport	1.12	2.00	1.51	0.93	1.75	1.16	1.46
J.D.							
ess Park	1.00	2.06	1.49	0.94	1.94	1.26	1.38
ay View Farm	0.81	1.74	1.23	0.72	1.52	0.97	0.99
ge Works	0.92	1.55	1.20	0.80	1.35	0.97	1.12
lside Farm	0.61	1.21	0.83	0.61	1.19	0.82	0.76
B.							
mar School	0.84	1.90	1.31	0.80	1.78	1.13	1.01
ays Depot	0.86	2.04	1.38	0.86	2.23	1.33	1.12
e Works	0.90	1.95	1.28	0.90	1.95	1.21	1.04
l M.B.							
ia Park	1.01	2.22	1.55	0.95	1.96	1.26	1.19
vick, Mosley Road	4.28	6.42	3.59	2.60	4.59	3.17	9.53
vick, West Works	3.14	4.32	3.59	2.40	3.23	2.44	7.65
U.D.							
l Road	0.99	1.93	1.41	0.94	1.81	1.33	1.14
Road	0.68	1.57	1.08	0.63	1.42	0.97	0.74
Works, Davyhulme	1.30	2.57	1.90	1.14	2.50	1.76	1.87
burne Park	1.07	2.32	1.61	1.03	2.34	1.58	1.15
Power Station	2.01	2.77	2.37	1.94	3.29	2.59	1.43
DIRECTION (Percentage of total observations)							
	5.2	6.2	5.5	6.5	9.6	7.9	4.2
	8.4	5.1	6.5	8.9	7.4	8.2	6.1
	8.1	7.2	8.0	5.1	7.2	6.1	5.8
	5.0	8.5	7.0	4.7	3.7	4.2	7.9
	25.7	36.3	30.7	19.7	35.0	27.0	31.1
	14.9	12.3	13.7	14.8	8.6	11.9	14.3
	18.7	14.6	16.8	26.5	12.2	19.7	18.9
mperature °F	14.0	9.8	11.8	13.8	16.3	15.0	11.7
	57.1	40.6	48.8	56.8	39.7	48.3	58.0

ESTIMATION OF SULPHUR DIOXIDE expressed as mgm. SO_3/day/100 cm^2 Batch A (louvred cover).

S_5 = mean results May-September; W_5 = mean results November–March; Y_{12} = yearly April–March.

Site	Apr. 1953	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Means			
										Winter		Summer	
										1951–52	1952–53	1952	195
Audenshawe U.D.													
Ryecroft Hall	2.05	1.40	1.39	1.43	1.48	1.68	1.99	2.53	2.55	2.31	2.14	1.00	1.
Chadderton U.D.													
132, Birch Lane	1.71	1.21	1.07	1.23	1.04	1.55	2.29	2.96	2.58	—	2.08	0.82	1.
Grammar Sch.	3.08	2.34	1.67	2.20	*	2.81	3.92	5.39	4.70	3.14	2.81	1.25	2.
Crompton U.D.													
Croft Bank ..	1.58	1.10	1.04	1.03	0.85	1.30	1.99	2.97	2.36	2.08	2.07	0.79	1.
Home Farm ..	2.47	1.70	1.27	2.52	1.76	2.33	2.61	4.06	3.06	2.42	2.22	1.18	1.
Denton U.D.													
Sewage Works	1.61	1.19	1.04	0.95	0.75	0.93	1.13	0.77	1.74	1.76	1.62	0.77	0.
Town Hall ..	2.21	1.53	1.39	1.11	1.19	1.44	1.78	1.85	2.31	2.23	2.19	1.05	1.
Droylsden U.D.													
Cemetery ..	2.66	1.63	1.55	1.63	1.60	1.94	2.52	3.43	3.19	2.84	2.58	1.28	1.
Dukinfield M.B.													
Dukinfield Pk.	1.90	1.24	1.19	1.12	1.10	1.56	2.04	2.91	2.29	2.42	2.29	1.06	1.
Failsworth U.D.													
Highways Dept.	2.50	*	1.91	2.17	2.10	2.20	3.14	3.64	3.11	2.64	2.60	1.18	2.
Farnworth M.B.													
Sewage Works	2.16	1.70	1.52	1.19	1.31	1.97	2.46	3.29	3.55	—	—	—	1.
Highways D'p't	2.80	2.33	2.21	1.54	1.70	*	4.07	3.76	4.60	—	—	—	1.
Hyde M.B.													
Birch Hse. Yrd.	2.21	1.37	1.56	1.75	1.12	1.76	2.70	2.40	3.07	2.07	2.31	1.04	1.
Reservoir ..	1.85	1.64	1.56	1.21	1.39	1.46	1.69	2.08	2.42	2.13	1.76	1.04	1.
Lees U.D. ..													
Cemetery ..	1.72	0.98	1.16	1.04	0.90	1.14	1.62	1.80	1.91	2.00	1.67	0.85	1.
Limehurst R.D.													
Sewage Works	2.57	1.60	1.59	1.58	1.56	1.96	2.59	3.28	3.32	—	—	—	1
LittleboroughU.D.													
Sewage Works	2.62	1.98	1.34	1.74	1.25	1.98	2.92	4.13	3.56	—	—	—	1
New Barn Farm	2.17	1.40	1.39	1.67	1.16	1.90	2.75	4.04	3.73	—	—	—	1
Little Lever U.D.													
Cricket Ground	3.11	2.16	1.58	2.05	2.03	2.75	3.50	5.10	4.36	—	—	—	2
Middleton M.B.													
Town Hall ..	1.85	1.18	0.94	0.88	0.68	0.95	1.50	2.66	2.43	2.08	2.01	0.76	0
Thornham Sch.	2.27	1.50	1.42	1.75	1.50	2.06	2.99	4.20	3.40	2.37	2.22	1.06	1
Mossley M.B.													
Town Hall ..	1.85	1.31	1.25	0.98	0.91	1.23	1.81	1.94	2.05	1.66	1.82	0.84	1
Lower Hey Frm.	2.43	1.37	1.08	1.19	1.11	1.27	1.67	1.81	2.05	2.15	1.93	1.07	1
Milnrow U.D.													
Pumping Station	1.96	1.30	1.10	1.50	1.29	1.72	2.12	3.47	2.70	—	—	—	1
Oldham C.B.													
Haven Lane Nursery ..	2.15	1.38	1.30	1.42	1.25	1.50	2.09	3.30	2.61	2.39	2.17	1.01	1
Horsedge St. Nursery ..	3.62	2.47	1.94	2.50	2.35	2.96	4.28	5.94	4.73	3.74	3.40	1.63	2
Westhulme H.	2.87	1.79	1.62	1.96	1.70	2.21	3.29	3.55	3.80	3.14	2.68	1.23	1
Westlands ..	3.53	2.32	2.32	2.41	2.13	2.66	3.71	4.86	4.00	3.59	3.21	1.55	2
Alexandra Pk.	2.41	1.61	1.49	1.69	1.58	1.69	2.10	4.05	2.67	2.84	2.19	1.16	1
Prestwich M.B.													
Town's Yard	2.16	1.78	1.49	1.47	1.56	2.09	3.28	3.01	3.73	2.73	2.68	1.13	1
Sewage Wks.	2.85	2.07	1.76	2.31	2.30	2.87	3.14	3.89	3.74	2.98	2.48	1.30	2

te	Apr. 1953	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Means				
										Winter		Summer		Year
										1951 –52	1952 –53	1952	1953	1952 –53
M.B.														
ary Sch.	2.58	2.37	1.76	1.66	1.35	2.24	3.52	3.82	4.19	—	—	—	1.88	—
ark ..	2.30	1.48	1.23	1.36	1.32	1.60	2.41	3.72	3.03	—	—	—	1.40	—
J.D.														
Chadder														
.. ..	2.49	1.85	1.75	1.89	1.68	2.48	3.61	5.06	3.95	2.58	2.66	1.02	1.93	1.64
Park..	2.13	1.52	1.21	1.52	1.40	1.92	2.61	3.93	3.20	2.61	2.06	1.03	1.51	1.47
e M.B.														
Grnd.	2.33	1.66	1.72	1.62	1.60	2.10	3.06	3.02	2.69	2.54	2.25	1.24	1.74	1.65
d ..	2.16	1.78	1.48	2.05	1.76	2.33	2.53	3.46	2.61	2.39	2.05	1.11	1.88	1.51
nd														
y M.B.														
le Park	2.42	1.97	1.67	1.24	1.13	1.88	2.93	3.22	3.87	2.41	2.38	1.04	1.58	1.60
Park	2.63	2.01	1.81	1.04	1.43	2.39	3.82	3.49	3.92	2.93	2.79	1.22	1.74	1.92
U.D.														
Grnd.	1.58	1.13	0.95	1.38	0.86	1.31	1.82	1.96	2.38	1.70	1.78	0.77	1.13	1.19
Works	1.89	1.37	1.26	1.37	1.55	1.91	2.42	3.62	2.99	2.22	2.01	1.04	1.49	1.43
U.D.														
y, Facit	1.33	0.93	0.79	1.01	0.99	1.41	2.02	2.92	2.30	—	—	—	1.03	—

* Apparatus damaged

DIRECTION (Percentage of total observations)

..	0.9	2.6	13.6	2.5	0.9	2.7	4.5	1.2	3.5	4.9	9.6	6.5	4.2	7.9
..	11.4	6.8	16.5	4.1	0.9	3.5	5.4	0.0	6.2	4.9	7.4	8.9	6.1	8.2
..	13.2	14.5	7.7	2.5	0.9	3.5	7.2	0.0	10.6	6.9	7.2	5.1	5.8	6.1
..	8.7	13.7	8.7	0.8	1.7	15.0	10.8	0.0	14.2	6.5	3.7	4.7	7.9	4.2
..	21.1	25.7	14.6	36.0	36.8	40.7	52.3	61.2	41.6	36.8	35.0	19.7	31.1	27.0
..	12.3	9.4	4.9	25.4	20.5	9.8	7.2	30.6	3.5	14.6	8.6	14.8	14.3	11.9
..	18.4	6.8	19.4	20.5	29.0	18.6	5.4	7.0	8.9	16.4	12.2	26.5	18.9	19.7
..	14.0	20.5	14.6	8.2	9.4	6.2	7.2	0.0	11.5	8.8	16.3	13.8	11.7	15.0
ure														
..	44.9	55.1	57.8	59.5	60.5	57.0	49.5	47.5	43.9	41.2	39.7	56.8	58.0	48.3

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